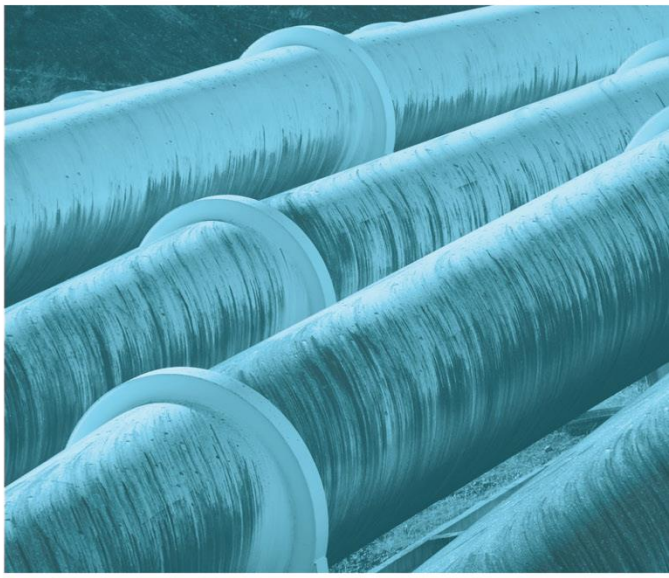



East Coast Grid Expansion - Stage 1
MW880
SSI-15548591
Construction Traffic Management Plan

Prepared for APA Group
December 2021

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Construction Traffic Management Plan

Report Number

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Client

APA Group

Date

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13 December 2021

Approved by

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13 December 2021

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1 Introduction

1.1 Background

East Australian Pipeline Pty Ltd, part of the APA Group (APA) currently operates an underground high pressure natural gas transmission pipeline, extending from Moomba (South Australia) to Wilton (New South Wales), a distance of approximately 1,299 kilometres (km). The Moomba to Wilton Pipeline (MWP) is the mainline part of the Moomba Sydney Pipeline (MSP) and was constructed in 1976.

APA is proposing an expansion of gas transportation capacity on its East Coast Grid that links Queensland to southern markets ahead of projected 2023 supply risks. Expansion would be through the construction of additional compressor stations and associated works on both the South West Queensland Pipeline (SWQP) in Queensland and the MWP in NSW.

EMM Consulting Pty Limited (EMM) prepared Modification Report 1 (Mod Report 1) (EMM 2021a) on behalf of APA which was lodged with the Department of Planning, Industry and Environment (DPIE) for Stages 1 and 2 of the East Coast Grid Expansion (the project) and was approved on 5 October 2021. Modification 1 covers the construction and operation of two compressor stations on the MWP – Stage 1 at MW880 (Milne), and Stage 2 at MW433 (Round Hill).

1.2 Overview

This Construction Traffic Management Plan (CTMP) has been prepared by Abdullah Uddin (Associate Traffic Engineer, TfNSW#0051686678) of EMM as a suitability qualified and experienced person on behalf of APA. The CTMP has been prepared to manage transport impacts associated with the construction of Stage 1 of the East Coast Grid Expansion, located on Lot 1 DP580284, approximately 35 km south-west of Condobolin. The site location is shown in Figure 1.1.

The CTMP has been prepared in accordance with approval Conditions B5 and B6 of the consolidated project approval (as follows):

B5. *The proponent must:*

a) minimise traffic and pedestrian safety issues and disruption to local users of the transport route/s during construction; and

b) maintain all roads and utility-related infrastructure in a safe and serviceable condition.

B6. The proponent must undertake road maintenance and grading works on various sections of Crown Camp Road identified in the Modification Report, to the satisfaction of Lachlan Shire Council.

If an agreement of the appropriate road maintenance works cannot be reached, then either party may refer the matter to the Planning Secretary for resolution.

The proponent must implement the approved CTMP, which will be incorporated as part of the project Construction Environment Management Plan (CEMP).

Figure 1.1 Site location and primary transport route

1.3 The project

This CTMP includes:

- a review of relevant construction plans and documents;
- the relevant statutory and policy controls that apply to the site and land use;
- details of:
  - the location of proposed work site access points;

- construction vehicle types and haulage routes;
- construction workers parking;
- proposed construction program and hours of construction;
- estimated number of construction vehicle movements (light and heavy);
- any potential impacts to general traffic, cyclists, pedestrians and bus services within the vicinity of the site from construction vehicles during construction;

- a Drivers Code of Conduct; and
- an assessment of the suitability of potential Oversize/ Overmass (OSOM) vehicle access routes to /from the site for the largest and/ or heaviest types of vehicles required to access the site, for deliveries of construction materials and equipment.

1.4 Consultation

Preliminary consultation and liaison were completed between APA and Lachlan Shire Council (Council) in relation to the agreement of appropriate road maintenance works to Crown Camp Road in accordance with Condition B6.

Based on the preliminary consultation, Council has resolved to work with APA on agreed road works for Crown Camp Road to support construction of the project. Evidence of this agreement has been lodged with DPIE in support of Condition B6.

Copies of the Council roads submission and APA group response documents are included as Appendix A.

2 Project description

2.1 Locality and surrounding development

The ECGE in NSW will be facilitated by the construction of five compressor stations, through a staged approach, along the length of the Moomba to Wilton Pipeline (MWP). This CTMP addresses the construction of the compressor station for Stage 1 at MW880 (also known as Milne). Crown Camp Road is an unsealed local road located adjacent to the northern site boundary.

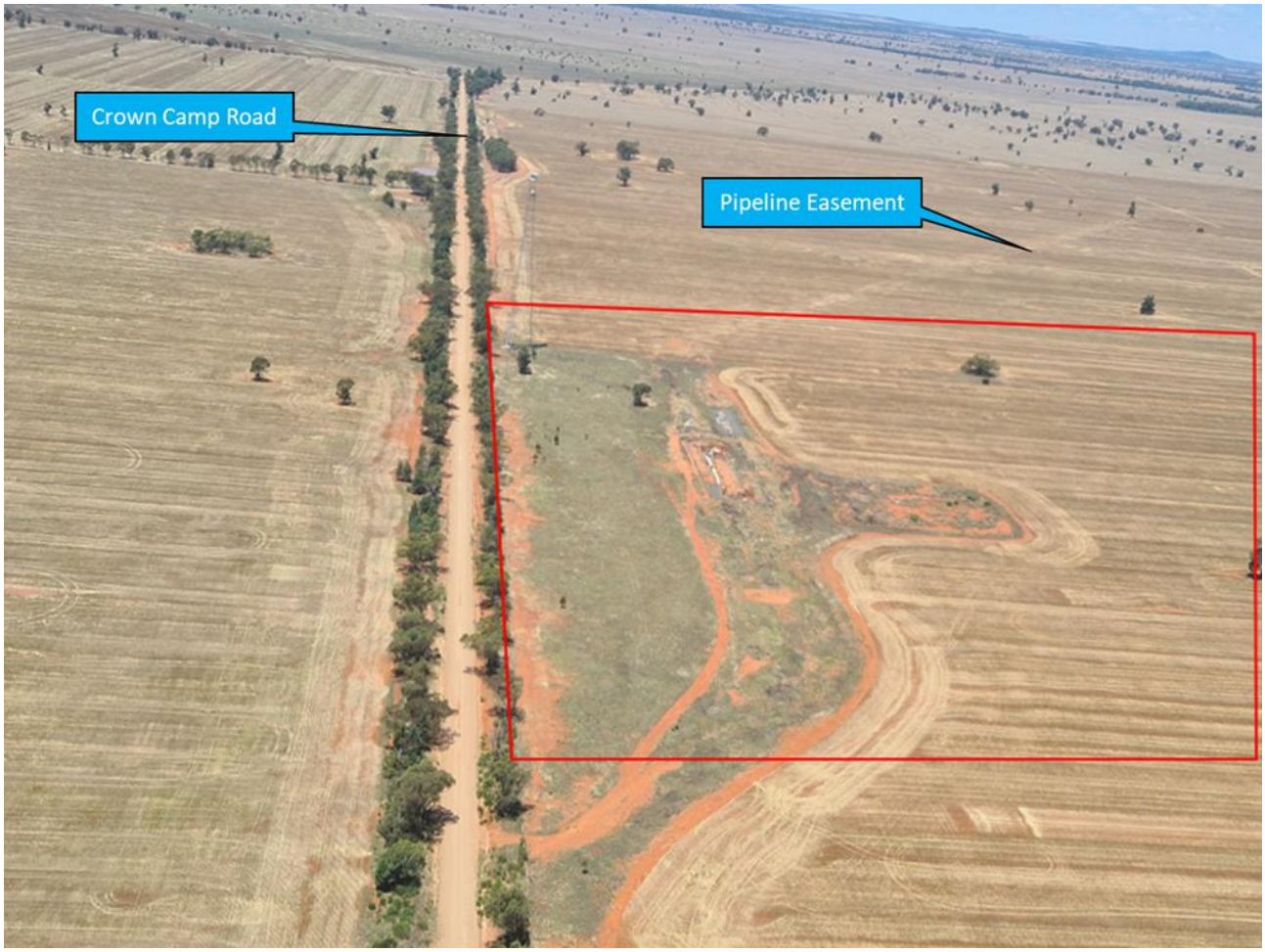


Figure 2.1 Aerial view of site MW880 adjacent to Crown Camp Road looking east

As shown by the site locality plan (zoning map extract) in Figure 2.2, the areas surrounding the site are all rural and zoned for either Primary Production or Forestry, there are no urban or residential areas close to the site. The closest urban areas to the site are Ungarie, approximately 28 km south of the site, and Condobolin, approximately 35 km north east of the site.

Construction materials and supplies (including food and services for the temporary accommodation camp) will be sourced from relevant suppliers, most likely to or from or via Condobolin, and transported to the site on a regular basis over the 12-month project construction and commissioning period.

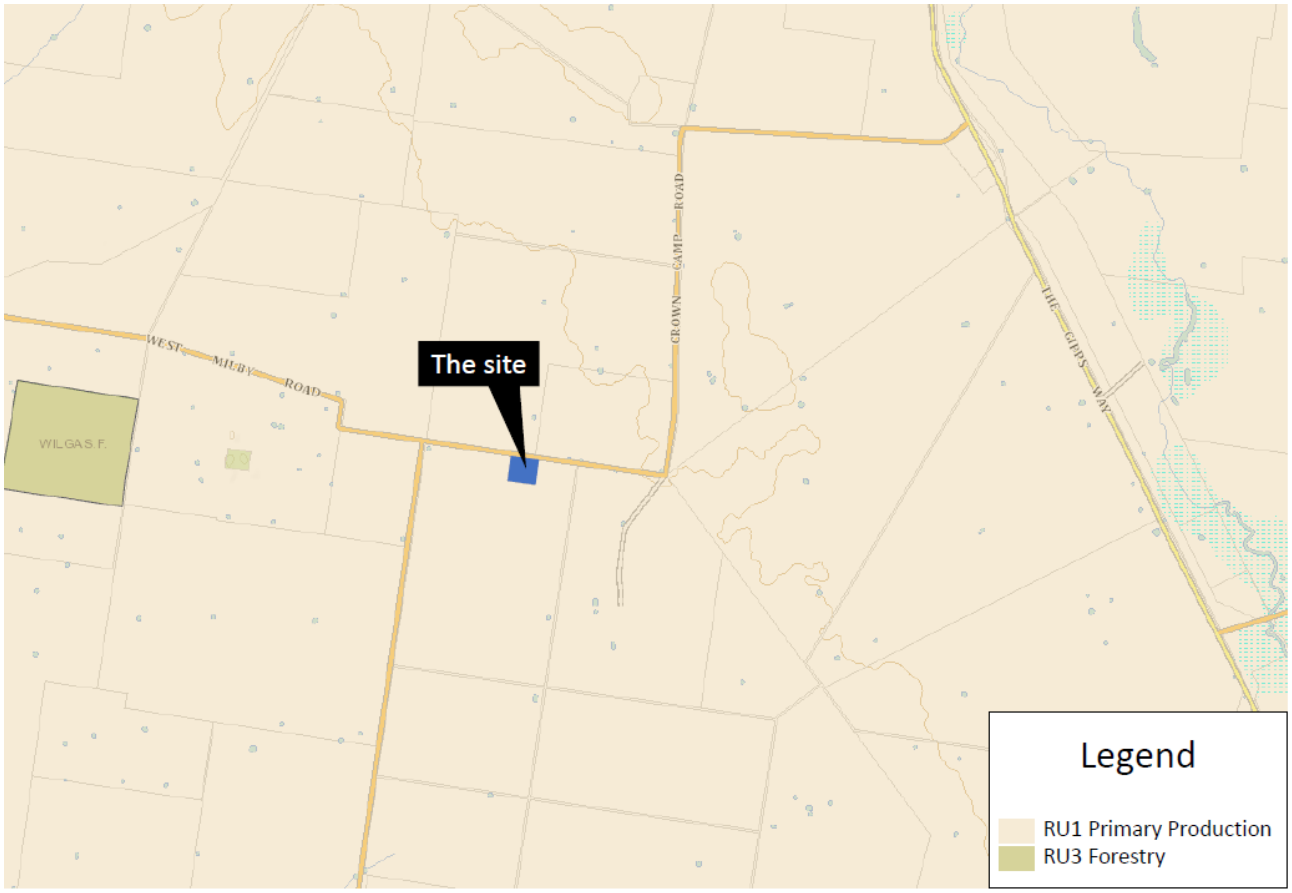


Figure 2.2 Site locality plan showing zoning map extract

2.2 Project construction details

Construction activities will be restricted to the approved Site Area. Following construction, temporary infrastructure will be removed while the permanent facilities will be fenced off. These areas will generally occupy the northern part of the site, as shown by the site layout plan in Figure 2.3.

The location of the proposed construction access for the compressor construction works will be from Crown Camp Road, along the pipeline easement, from a location near the north western corner of the site, as shown on the site layout plan in Figure 2.3. The project construction access from Condobolin will be generally via the following roads.

- 29 km south from Condobolin via The Gipps Way, including a short section of Lachlan Valley Way, then
- A 4.3 km section west along Crown Camp Road from the intersection with The Gipps Way, then
- A further 5.0 km section south along Crown Camp Road, then
- A further 2.4 km section west along Crown Camp Road, to the site construction access entry, which utilises 180 m to 200 m of the pipeline easement within the site.

The total route length travelled from Condobolin for the project construction traffic will be approximately 41 km each way including a total travel distance each way along Crown Camp Road of 11.7 km, from the intersection at The Gipps Way to the site.

Figure 2.3 Site layout plan showing location of proposed construction access

2.3 Construction work hours and staging

The majority of the site construction activities will take place between 07:00 am and 6:00 pm, seven days a week. During the commissioning phase, activities will also take place generally between 07:00 am and 6:00 pm, seven days per week, however for the final two weeks, commissioning activities will be 24-hours per day.

Construction of the compressor station will be directly adjacent to the existing MWP infrastructure and will consist of the following works:

- access upgrades;
- delivery of bulk earthworks materials;
- bulk earthworks;
- driven steel piling;
- erection of construction camp facilities;

- mobilisation of Construction crew;
- receival of equipment and materials;
- construction works consisting of civil, mechanical, structural, electrical and instrumentation installation associated with the installation of the new compressor package and associated systems; and
- commissioning activities.

The indicative project construction timeframes are provided below:

- access upgrades: March 2022 to early April 2022;
- delivery of bulk earthworks materials: late February 2022 to late March 2022;
- bulk earthworks: March 2022 to mid-May 2022;
- driven steel piling: May 2022 to early June 2022;
- camp establishment: April 2022 to mid-May 2022;
- construction and pre-commissioning: May 2022 to late-November 2022; and
- camp removal, commissioning and handover: November 2022 to late-March 2023.

2.4 Proposed construction workforce

The proposed construction workforce numbers for each stage of construction are as follows:

- access upgrades (10 persons)
- bulk earthworks (15 persons)
- driven steel piling (15 persons)
- erection of construction camp facilities (15 persons)
- construction works consisting of civil, mechanical, structural, electrical and instrumentation (65 persons)
- commissioning (15 persons)

Shuttle buses will be used to transport the project construction workforce to and from the site at each roster change, which is typically every two weeks. The workforce shuttle buses will typically operate to/ from Dubbo.

2.5 Construction traffic movements

The project construction daily vehicle movements (peak and average) for the four main stages of construction, including both light (commuter) and heavy (material deliveries) vehicle movements are shown in Table 2.1 :

Table 2.1 MW880 peak and average daily traffic generation

Construction stage	Peak daily light vehicle trips	Peak daily heavy vehicle trips	Average daily light vehicle trips	Average daily heavy vehicle trips
Delivery of bulk earthworks materials	0	102	0	80
Access upgrades, bulk earthworks, driven steel piles, erection of camp facilities	30	14	15	3
Construction works consisting of civil, mechanical, structural, electrical and instrumentation	18	15	6	4
Commissioning and handover	28	13	16	3

The peak daily site traffic generation at the peak of construction activity is expected to be 102 heavy vehicle trips, which will represent a daily total of up to 204 daily vehicle movements.

The average daily site traffic generation at the peak of construction activity is expected to be 80 heavy vehicle trips, which will represent a daily total of up to 160 daily vehicle movements. A 'trip' is defined as a vehicle entering the site once (1 movement) and a vehicle exiting the site once (1 movement).

As MW880 will have on-site workforce accommodation, the daily site light and heavy vehicle movements will be distributed relatively uniformly over each working day. The delivery of project construction equipment and materials will be actively scheduled to avoid school bus times and other local traffic peak periods where possible.

It is noted that delivery of bulk earthworks materials will originate from Council managed quarry (Webbs pit) to Crown Camp Road and will have a total distance of approximately 9 km.

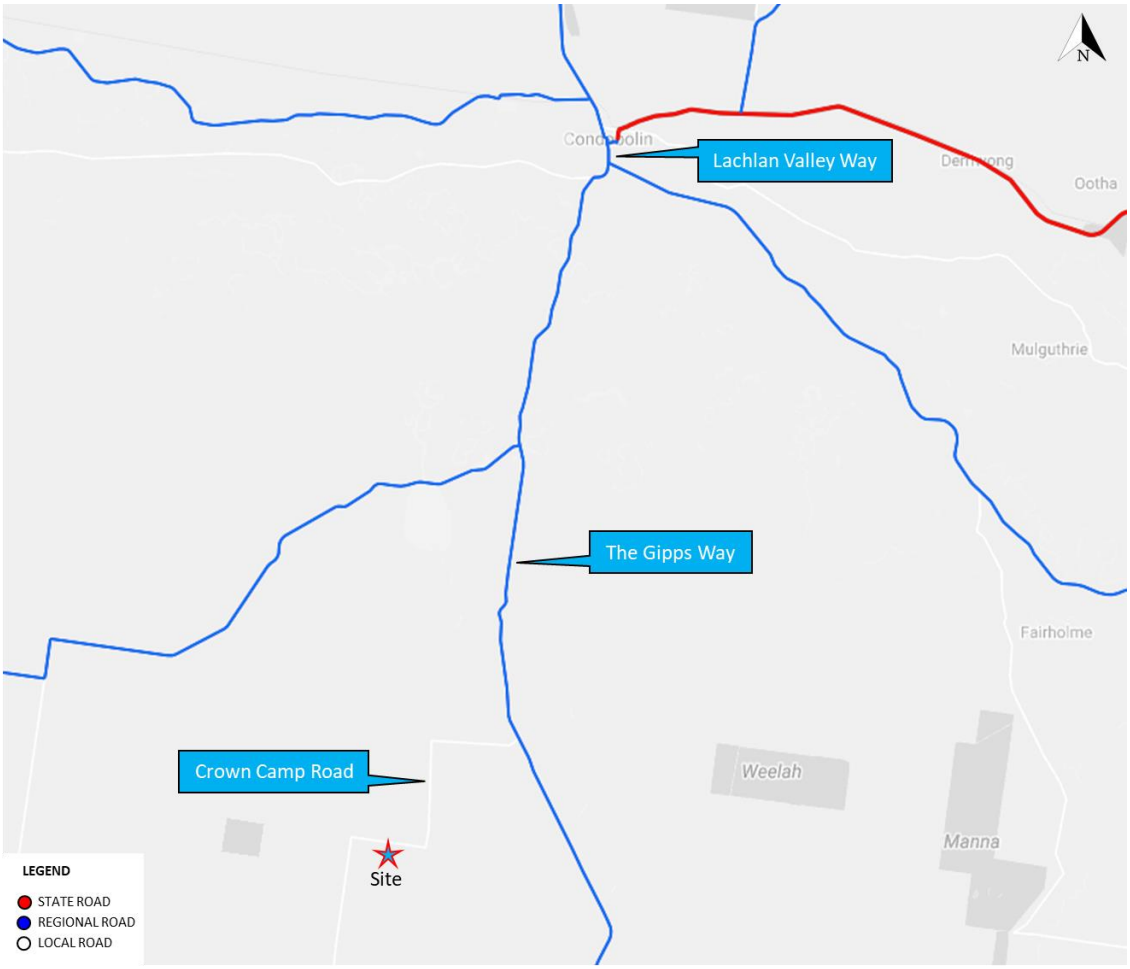
3 Road network and traffic conditions

3.1 Road hierarchy

The NSW administrative road hierarchy comprises the following road classifications, which align with the road hierarchy definitions as follows:

- State roads - freeways and primary arterials (TfNSW managed);
- regional roads - secondary or sub arterials (Council managed and part funded by the State); and
- local roads - collector and local access roads (Council managed).

Figure 3.1 shows the location of roads and Table 3.1 to Table 3.3 provide a detailed description of each road along the proposed construction access route via Condobolin.



Source: Carto

Figure 3.1 TfNSW road hierarchy

Table 3.1 Lachlan Valley Way

Aspect	Description
Road classification and connectivity	Regional road between Newel Highway (east) and Gipps Way (west)
Alignment	East-west
Number of lanes	One lane each way
Carriageway type	Sealed road
Carriageway width	Approximately 7 m overall width with 3.5 m wide travel lane each way
Posted speed limit	100 km/hr
Heavy vehicle access	Yes
Traffic function	Carries regional traffic and some local traffic
Additional comments	The road terrain is generally flat and level

Source: Google Maps

Plate 3.1 Lachlan Valley Way (looking south)

Table 3.2 The Gipps Way

Aspect	Description
Road classification and connectivity	Regional road between Condobolin (north) and W Wyalong Condobolin Road (south)
Alignment	North-south
Number of lanes	One lane each way
Carriageway type	Sealed road
Carriageway width	Approximately 8 m overall width with 4 m wide travel lane each way
Posted speed limit	100 km/hr
Heavy vehicle access	Approved for heavy vehicles up to 19m and under 50 tonnes
Traffic function	Carries regional traffic and some local traffic
Additional comments	The road terrain is generally flat and level

Source: EMM

Plate 3.2 The Gipps Way near the Crown Camp Road intersection (looking north)

Table 3.3 Crown Camp Road

Aspect	Description
Road classification and connectivity	Local road between The Gipps Way (east) and Ungarie (south)
Alignment	Varies
Number of lanes	No lane markings
Carriageway type	A mix of sealed and unsealed sections of road
Carriageway width	Approximately 9 m sealed, 15 m unsealed
Posted speed limit	100 km/hr
Heavy vehicle access	Approved for heavy vehicles up to 19 m and under 50 tonnes
Traffic function	Carries local traffic
Additional comments	The route alignment has a combination of straight sections linked by some sharp bends

Source: EMM

Plate 3.3 Crown Camp Road near the site access (looking west)

3.2 Traffic volumes

The TfNSW Traffic Volume Viewer does not provide any traffic volume data for any roads in the vicinity of this site. Traffic surveys have not been conducted due to the remote location of the site. Due to the rural location, daily traffic volumes are likely to be low in comparison to most urban areas.

An indication of the likely current daily traffic volumes for the affected roads on the project construction access route to/from Condobolin can be obtained from the database of the historic RMS daily traffic volume counts for the Western Region of NSW, prior to 2005, which indicates daily traffic volumes and the relevant Austroads road design guide (2017) sealed width construction standards for each road, as shown in Table 3.4.

Table 3.4 MW880 Approximate daily existing traffic volumes

Road	Description of road	Approximate daily existing traffic volume	Austroads Guide to Road Design standard in accordance with daily traffic volume
Lachlan Valley Way	Regional road between Newel Highway (east) and Gipps Way (west)	Up to 900 vehicle movements	Minimum 7.2−8 m wide seal
The Gipps Way	Regional road between Condobolin (north) and W Wyalong Condobolin Road (south)	Up to 400 vehicle movements	Minimum 7.2 m wide seal
Crown Camp Road	Local road between The Gipps Way (east) and Ungarie (south)	Up to 100 vehicle movements	8.7 m wide total carriage (if unsealed); or Minimum 3.7 m wide seal

Based on the traffic count information summarised in Table 3.4 above, the additional daily vehicle movements proposed for this construction project, as listed in Table 2.1, are not likely to be significant when compared to existing daily vehicle movements on the Lachlan Valley Way and The Gipps Way routes.

However, on the Crown Camp Road route, the additional daily vehicle movements which are proposed as part of this construction project, as listed in Table 2.1, are likely to be significant when compared to existing daily vehicle movements. The affected sections of Crown Camp Road will require a program of upgrades and increased maintenance to handle the numbers of additional daily vehicle movements required for construction of the pipeline compressor station over a 12-month period.

This is confirmed by the project consent condition B6, which requires the project proponent to undertake road maintenance and grading works on the various affected sections of Crown Camp Road, to the satisfaction of Council. Further details of the discussions and consultation between the proponent and Council are included as Appendix A to this CTMP.

3.3 Traffic safety

The access to the site from Crown Camp Road via the pipeline easement is located on a long straight section of road, hence there are no sight distance related traffic safety issues for traffic either entering or exiting to/from the site at the entrance driveway. This is illustrated by the site access intersection sight distance photographs in Photograph 3.1 .

The access to and from The Gipps Way at the Crown Camp Road intersection is also located on a long straight section of road, hence there are no sight distance related traffic safety issues for traffic entering or exiting to/from Crown Camp Road at The Gipps Way.

Photograph 3.1 Site access intersection sight distance photographs looking east and west

4 Construction traffic management

4.1 Objective

This CTMP aims to ensure the safety of all workers and road users within the vicinity of the construction site and the following are the primary objectives:

- to minimise the impact of the construction vehicle traffic on the overall operation of the road network;
- to ensure continuous, safe and efficient movement of traffic for both the general public and construction workers;
- installation of appropriate advance warning signs to inform users of the changed traffic conditions;
- to provide a description of the construction vehicles and the volume of these construction vehicles accessing the construction site;
- to provide information regarding the changed access arrangement and a description of the proposed external routes for vehicles including the construction vehicles accessing the site; and
- establishment of a safe pedestrian environment in the vicinity of the site.

4.2 Hours of work

The proposed project construction work hours are generally:

- 7:00 am – 6:00 pm, Seven days per week.

The transportation of materials to and from the worksite will generally be limited to the hours detailed above. Any deliveries of large loads will be scheduled to avoid local school and commuter travel times on routes such as Crown Camp Road, where this is feasible.

4.3 General requirements

In accordance with TfNSW requirements, all vehicles transporting loose materials will have the entire load covered and/or secured to prevent any large items, excess dust or dirt particles depositing onto the roadway during travel to and from the site. All subcontractors must be inducted by the lead contractor to ensure that the CTMP and related traffic control procedures are met for all vehicles entering and exiting the construction site. The lead contractor will monitor the roads leading to and from the site for dirt/debris and take all necessary steps to rectify any road deposits caused by site vehicles.

Vehicles operating to, from and within the site shall do so in a manner, which does not create unreasonable or unnecessary noise or vibration. No tracked vehicles will be permitted or required on any paved roads. Public roads and access points will not be obstructed by any materials, vehicles, refuse skips or the like, under any circumstances.

4.4 Site access

Due to the low baseline and proposed construction daily traffic volumes currently using Crown Camp Road and the even lower likely peak hour traffic volumes, no traffic safety or traffic congestion impacts are anticipated to occur with the project construction traffic movements at the site access locations.

4.5 Construction vehicle types

The development will require the removal and delivery of mixed materials. Deliveries will be generally using rigid trucks or semi-trailers or other prime movers of the following types:

- semi-trailers;
- truck and dog trailers;
- side tippers;
- prime mover and floats;
- loaders;
- bulldozers;
- excavators;
- a pile driving rig;
- a water cart (nominally a 25 kilo-litre (kL));
- 3 tonne (t) and 8 t Hiab trucks; and
- a 25 t Franna crane.

For over size or over mass (OSOM) vehicles, the likely maximum vehicle dimensions and weights will be to accommodate the following loads:

- Max package dimensions: 14.5 x 5.1 x 2m
- Max package weight 68 T

4.6 Construction vehicle routes

The primary transport route which will be used by truck traffic when either approaching or departing from the proposed construction work sites is shown in Figure 1.1 .

Delivery of bulk earthworks materials will originate from Council managed quarry (Webbs pit) to Crown Camp Road with a total distance of approximately 9 km.

The assessment of potential access routes to/ from various locations for over size or over mass (OSOM) vehicles, has been assessed separately which is included in Appendix B.

Intersection swept path drawings have been prepared for the typical (semi-trailer) and the largest type of truck (OSOM vehicle) which are included in Appendix C. These drawing have been prepared for the following four locations

- The site access intersection on Crown Camp Road, approximately 11.7 km from The Gipps Way;
- The intersection of Crown Camp Road with The Gipps Way; and
- The two bends located on Crown Camp Road approximately 4.3 km and 9.3 km from The Gipps Way.

4.7 Construction staging

The total proposed duration of the project construction period is 303 days, which represent 218 days for all construction activities followed by a further 85 days for commissioning. The detailed staging is described in Section 2.3.

4.8 Stakeholder consultation

The relevant State (TfNSW) and Council transport agency stakeholders have been informed of the project and possible impacts. Initial consultation has been undertaken with Council in relation to agreed upgrades and maintenance for Crown Camp Road, as recorded by the correspondence which is included as Appendix A.

4.9 Pedestrian access

To provide segregation and protection for pedestrians, site fencing will be provided to define all boundaries of the works site.

Pedestrian activity in the locality, including along Crown Camp Road, is generally minimal due to the distance (up to 30-40 km typically) from the nearest urban areas.

4.10 Works zone requirements

No work zones will be required to be signposted for this project, due to the rural nature of the locality. Typical truck entry warning signage, as shown below, will need to be provided in both directions at distances of 150 m and 350 m typically from the site entry driveway on Crown Camp Road. The truck warning signage will be removed when all construction and commissioning work at the site are completed.

Sign	Display
W5-22	
W8-207(L)	
W8-207(R)	

Figure 4.1 Truck warning signage

4.11 Road occupancy licences

If the works required for the pre-construction access road upgrades to Crown Camp Road require any lane or road closures the proponent shall submit a Road Occupancy Licence (ROL) application to Council for approval, prior to carrying out the associated works, unless the works are undertaken by the Council itself.

4.12 Staff parking

Sufficient construction workforce car parking will be provided at the work site, to eliminate any on-street parking demand.

The residentially based construction workforce who will be resident at the on-site accommodation facility will not generally require car parking as they will generally travel by shuttle buses to and from the work site at the beginning and end of their roster period.

4.13 Works site security

All site access gates will be securely locked when the site is unoccupied, or construction activities are not in progress.

4.14 Staff safety and induction briefings

All staff and subcontractors will be required to undergo a site induction prior to the commencement of their work on-site. The site induction will include briefings in relation to permitted transport routes for travel to and from the work site for light and heavy vehicles, as well as standard environmental, occupation health and safety, vehicle safety and emergency safety procedures, eg to identify safe routes for site evacuation including when there are adverse weather conditions.

4.15 Occupational health & safety

Any personnel required to undertake works or traffic control within the public domain shall be suitably trained and covered by appropriate insurances. If any traffic controllers are used, they must be TfNSW accredited.

4.16 Driver's Code of Conduct

The Driver's Code of Conduct (Appendix D) will be required to be read and signed by all light and heavy vehicle drivers when coming to site in addition to regular safety briefings and updates to address all relevant site and locality road safety and traffic management measures including:

- compliance with all road rules and regulations;
- commuter traffic routes;
- vehicle speeds;
- driving to local road conditions;
- driver behaviour near schools, residential and shopping areas;
- courtesy to other road users;
- fatigue management;

- dangers of mobile phone use while driving;
- checking vehicles and covering loads;
- the appropriate use of compression braking; and
- safety procedures for accidents and breakdowns.

4.17 Traffic control plan and intersection swept path drawings

A Traffic Control Plan (TCP) will be developed by the contractor in accordance with the Australian Standards and the RMS Traffic Control at Work Sites Manual Version 6 (TfNSW 2020). The TCP will be lodged separately along with any relevant Section 138 application and submitted to the relevant authorities, prior to the commencement of construction.

All recommended truck warning signs must be installed at the start of the project construction period and maintained continuously while activities associated with construction are occurring. No signs will be placed when construction activities are not scheduled to occur.

The TCP will include the intersection swept path drawings at four locations, which are shown in Appendix C.

References

Austroads (2017). Guide to Road Design Part 4A: Unsignalised & Signalised Intersections.

RMS (2018). Traffic Control at Work Sites.

Appendix A

Consultation responses

LACHLAN SHIRE COUNCIL

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PO Box 216
CONDOBOLIN NSW 2877
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E: council@lachlan.nsw.gov.au
ABN 82 815 250 829

13 August 2021
Contact Person: B Koop

Department of Planning, Industry and Environment
PO Box 39
SYDNEY NSW 2001

Attention: Rose-Anne Hawkeswood
Team Leader Energy, Climate Change and Sustainability

Dear Rose-Anne,

Application Number: SSI-15548591Mod-1
Applicant: East Australia Pipeline Pty Ltd
Description of Proposed Modification: Compressor Station

Thank you for the opportunity to provide a submission in relation to the above mentioned project.

The documentation submitted with the modification application has been reviewed and a number of comments/observations are made below in relation to specific aspects of the proposal.

Socio-Economic Assessment (SEA) Review

The outcomes from the SEA prepared by EMM include:

- *The compressor station locations have been selected partly based on their distance from sensitive receptors, including regional towns and private residences, and local impacts will be limited.*

- *Key benefits include potential economic growth and employment opportunities associated with an increase in job opportunities locally, regionally, and state-wide. Given the comparatively high levels of unemployment within local LGAs, and a regional workforce with resource industry experience, there is potential to employ workers from within the local community.*

- *APA will engage with local accommodation providers to ensure the provision of short-term accommodation for project use will not negatively impact the capacity of local accommodation providers to serve additional guests.*

- *Economic and social benefits within the local and regional area will occur through procurement of appropriate goods and services from local businesses, where available. This will create some benefits during construction, and these may continue, but at a lesser level during operations.*

The SEA report, prepared by EMM, states:

> *Potential impacts associated with using local temporary accommodation to house the project workforce includes straining the capacity of local accommodation providers. This could have flow-on negative impacts on local tourism and long-term accommodation users by taking up additional capacity. In addition, the presence of a non-resident workforce could have potential negative impacts on the local community as a result of anti-social behaviour in the town.*

There is limited short term accommodation supply in Condobolin and in other areas of the Shire and the project will have a cumulative effect on short term accommodation availability when coupled with other projects which are being carried out within the Lachlan Shire or surrounding Local Government Areas (e.g. Inland Rail, Sunrise Mine, mining exploration activities, Mineral Hill Gold Mine, Evolution Gold Mine expansion, Parkes Special Activation Precinct, Parkes By-Pass, etc.).

Tourism is an important industry that would be impacted greatly by this project if a minimum of 58% of Condobolin's short term accommodation options was removed, for a period of at least 12 months. Council also raises doubt from discussions that there was 77% availability for accommodation providers over April and March 2021.

The option of a temporary accommodation camp on-site has been identified in the report and should be explored in more detail given the concerns raised above and given the use of a temporary accommodation camp stated in the report for MW433:

> *The use of the on-site temporary accommodation camp at MW433 for the construction workforce will limit the potential impacts on local accommodation and housing, however there be limited opportunities for local accommodation providers or services.*

The socio economic review suggests that there will be positive benefits for the company in the form of a $262 million per year annual increase in sales, based on current market values. Further that there will be positive economic impacts on the local and regional areas due to increased supply and availability however for all of this including the impacts of the proposal there are no significant benefits for Lachlan Shire Council such as the establishment of a gas supply line directly to Condobolin.

Noise Impacts

The noise assessment report, prepared by NIA states:

> • *Specific noise targets were based on the minimum background noise levels provided in the NPfI, given the remote location of MW433 and MW880.*
>
> • *An assessment of construction noise generated at MW433 and MW880 indicated compliance with the standard construction hours criteria. Construction outside of standard construction hours will also be compliant at each location, with the exception of impact piling at MW880.*
> • *Operational noise from MW433 was addressed using a conservative screening noise model for a receiver at 10 km. The model considers noise propagation under worst-case noise-enhancing conditions. Predicted noise levels from the operation of this site is expected to be less than 9dB, which is 26dB below the 35dB LAeq 15min NPfI night-time noise criterion.*

- *Operational noise from MW880 were modelled for noise-enhancing meteorological conditions. Predicted noise from the operation of MW880 at the nearest affected assessment location is 31dB LAeq 15min which complies with the 35dB LAeq 15min night-time noise criterion.*

- *Noise associated with the general operation of the compressor stations was addressed for potential sleep disturbance during the night time period. Predicted noise levels indicate compliance with the sleep disturbance criteria for both MW433 and MW880.*

- *Noise associated with blowdowns during commissioning and operation will occur rarely, and for a short duration. Noise impacts from these events will be managed by consultation with nearby landholders.*

What upfront consultation has been undertaken with affected community members to identify and respond to the potential impacts such as during the blowdown events, including on livestock which are in close proximity?

It is suggested that construction activities are not undertaken at any time outside of the daytime hours period and that detailed consultation is undertaken with surrounding rural properties. This should include regular discussions with them during construction and prior to commissioning to constantly inform of activities. This should ensure that the impacts on residences and those primary producers with livestock are limited.

Traffic/Road Impacts

General Comments

1. The increase in traffic during the construction phase is of significant concern to LSC.

2. It should be noted that Crown Camp Road is a School Bus Route, and road safety on this road should be considered during the construction phase.

3. The Traffic Impact Assessment (TIA) identifies a relatively large increase in light and heavy vehicles. Whilst this rural road currently does not convey a large volume of traffic, these additional traffic volumes will have a negative impact on the road throughout the construction phase.

4. LSC regularly imposes weight restrictions on our unsealed road network for vehicles above 3 tonnes during wet weather. This is to preserve the road asset where possible and avoid unnecessary damage from heavy vehicle freight movements. These weight restrictions will also need to apply to this project. Exemptions can be granted upon request.

Comments on specific locations

5. Lachlan Valley Way upgrade is a project which is currently being undertaken by LSC. This is expected to be completed between January and July 2022. This will remove the deficiencies of this section of Road when measured against the Austroads standards.

6. The Gipps Way – over the last 4 years, LSC has widened and strengthened the majority of The Gipps Way considered in this project. There are no concerns regarding the impact of this project on this road.

7. Intersection of The Gipps Way and Crown Camp Road – it is thought that the current arrangement is suitable and will cater for the additional vehicle movements.

8. Crown Camp Road - Table 5.6 contains errors. The existing seal is not 9m wide, rather it is 3.5m wide for the first 500m, with 3m gravel shoulders. This section of seal is in poor condition as per **Figure 1** below. It is likely that the additional 31 light and heavy vehicles will have a significant effect on the condition of this section of road. LSC request that the proponent reconstruct and seal this section of road to 9 metres prior to the on-site works.

Figure 1 – Crown Camp Road looking east showing seal 3.5m wide for the first 500m, with 3m gravel shoulders (LSC - July 2021).

9. Chainage 500 – 4000 of Crown Camp Road is an 8 metre wide gravel road which is in good condition, as per **Figure 2** below. The additional traffic on this road during construction will require additional maintenance grading. Typically LSC grade this route twice a year. The cost of this additional maintenance should be borne by the proponent during the construction period.

Figure 2 – Crown Camp Road looking west showing 500 – 4000 of Crown Camp Road is 8m wide gravel road (LSC - July 2021)

10. Chainage 4000 – 9500 of Crown Camp Road is an 8 metre wide gravel/natural surface road with limited gravel coverage. The current condition of this section of road is poor, as shown in **Figure 3** below. This is largely due to the above average rainfall received in the area in recent times.

    The additional traffic on this road during construction will require additional gravel in order to ensure it can cater for the additional movements. The cost of gravel resheeting this 5km section of road should be borne by the proponent and be completed prior to construction works onsite. Typically LSC grade this route twice a year and additional maintenance grading will be required. The cost of this additional maintenance should be borne by the proponent during the construction period.

Figure 3 – Crown Camp Road showing 4000 – 9500 of Crown Camp Road is 8m wide gravel/natural surface road (LSC - July 2021)

11. Both 90 degree corners within this section of road should be considered more closely in relation to vehicle movements. One of the 90 degree corners is shown in **Figure 4** below.

Figure 4 – One of the two 90 degree corners within 4000 – 9500 of Crown Camp Road (LSC - July 2021)

12. Chainage 9500 – 1100 of Crown Camp Road is an 8metre wide gravel road in good condition, as illustrated in **Figure 5** below. The additional traffic on this road during construction will require additional maintenance grading. Typically LSC grade this route twice a year. The cost of this additional maintenance should be borne by the proponent during the construction period.

Figure 5 – Crown Camp Road showing 9500-1100 of Crown Camp Road is 8m wide gravel surface road (LSC - July 2021)

13. Construction Site entry and exit is currently non-existent. Improvements should be considered for the entry/exit to the site compound. This should include consideration of long vehicle freight access, drainage, site distances, fence/gate setbacks in accordance with **Figure 6** below.

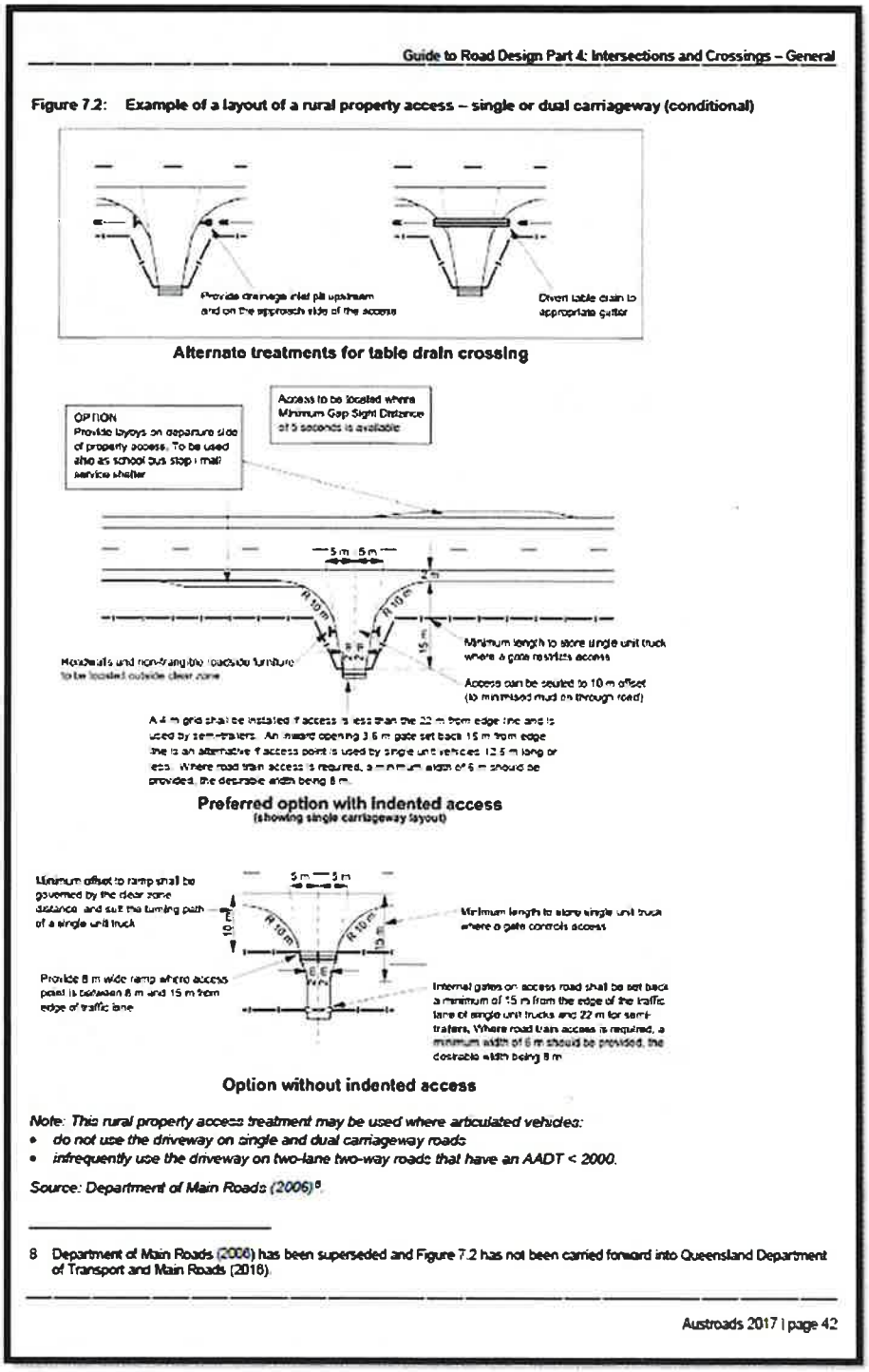


Figure 7.2: Example of a layout of a rural property access – single or dual carriageway (conditional)

Alternate treatments for table drain crossing

Preferred option with indented access
(showing single carriageway layout)

Option without indented access

Note: This rural property access treatment may be used where articulated vehicles:

- *do not use the driveway on single and dual carriageway roads*
- *infrequently use the driveway on two-lane two-way roads that have an AADT < 2000.*

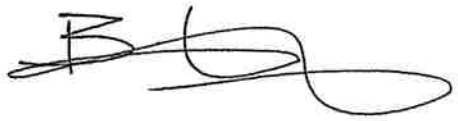
Source: Department of Main Roads (2006)[8]

8 Department of Main Roads (2006) has been superseded and Figure 7.2 has not been carried forward into Queensland Department of Transport and Main Roads (2016).

Figure 6 – Showing example of rural property access

If you should have any further enquires with regards to this matter please contact the undersigned on 02 6895 1950 during office hours.

Yours sincerely



Bryce Koop
Manager Town Planning
Environment, Tourism and Economic Development

APA Group Response to Lachlan Shire Council Roads Submission

Traffic / Road impacts Submission – General comments

LSC notes that the Traffic Impact Assessment (TIA) identified a relatively large increase in light and heavy vehicles and that this increase is of concern to Council as these traffic volumes may have negative impacts on identified roads during construction.

LSC notes that Crown Camp Road operates as a school bus route and road safety should be considered during construction.

Further, LSC states that weight restrictions (vehicles above 3 tonnes) are often imposed on unsealed roads during wet weather and that exemptions may be granted upon request.

Response

APA held a meeting with LSC on 01 September 2021 to discuss the potential use of a Council managed quarry site as well as the issues raised in the LSC submission.

As a part of the Traffic Impact Assessment for the Modification Report (Mod 1), APA assessed a worst-case scenario (31 peak vehicle trips per day) with regards to traffic generation. After further assessment, further refining of the project schedule and a better understanding of timing of certain construction activities, APA understands daily traffic movements for the project are likely to be reduced as defined below:

Initial three months (site and camp establishment): peak vehicle trips (LV and HV) will be approximately 22 per day during a period of approximately 1 week, while average vehicle trips over the initial three months will be approximately nine per day;

Main construction next six months: peak vehicle trips of approximately 17 per day coinciding with the mobilisation of equipment and an average over the six months of 5 vehicle trips per day; and

Final three months (commissioning / camp removal): peak vehicle trips during this period will be approximately 21 per day mainly concentrated over a single week of building removal, while average vehicle trips will be approximately 10 per day.

As previously described, APA will look to house the construction workforce in temporary accommodation on site which will reduce the number of vehicles using Crown Camp Road during construction.

APA will commission the development of a Traffic Management Plan prior to the commencement of construction activities. APA will ensure that safety concerns around the use of Crown Camp Road are included within the Traffic Management Plan and that these measures are implemented through the construction of the project. The Traffic Management Plan will ensure that major deliveries and heavy vehicle movements are scheduled outside of school bus times.

APA will seek, through Council, any exemptions required for weight restrictions on unsealed roads during wet weather.

Traffic / Road impacts Submission – Specific locations

Issue – Lachlan Valley Way

Lachlan Valley Way upgrade is a project which is currently being undertaken by LSC. This is expected to be completed between January and July 2022. This will remove the deficiencies of this section of Road when measured against the Austroads standards.

Response

Noted.

Issue – The Gipps Way

LSC notes that Council have widened and strengthened the majority of the Gipps Way over the last four years and they have no concerns regarding potential impacts from the project on this Road.

Council also notes that the current arrangements of the intersection of The Gipps Way and Crown Camp Road is suitable and will cater for the additional vehicle movements.

Response

Noted.

Issue – Crown Camp Road

LSC have identified a number of locations / sections of Crown Camp Road (as presented in Council's submission) that may require upgrade and / or maintenance grading during the construction phase of the project. LSC note that maintenance grading is typically undertaken twice a year and additional maintenance grading will be required. The cost of this additional maintenance grading should be borne by the proponent during the construction period.

Response

<u>Crown Camp Road</u>

APA have discussed potential road impacts of Crown Camp Road in a meeting with Council on 01 September 2021.

APA propose the following for Crown Camp Road:

- Dilapidation survey to be conducted prior to the commencement of construction on site.
- Chainage 0 - 500

  It was not possible to visually inspect each section of road in the TIA, and APA acknowledges the error in Table 5.6 of the TIA. As per the response to LSC's general traffic comments, the TIA assessed a worst-case scenario which has reduced significantly as project details and scheduling has been confirmed. Therefore, a full reconstruction and upgrade of the sealed surface to a 9m width is not warranted. APA acknowledges that some impacts may still occur, and is willing to discuss the option of minor repairs to the sealed section to reduce potential further degradation of the road surface.

- Chainage 500-4000 and 9500 - 1100
    - APA is willing to agree with Council a regime for the conducting of additional maintenance grading of this section of road as a result of additional project-related construction traffic. APA is willing to discuss details of the financial contribution for this maintenance as well as the timing of any payments with Council.

- Chainage 4000 – 9500

  APA is willing to agree with Council a regime for the conducting of additional maintenance grading of this section of road as a result of additional project-related construction traffic. APA is also willing to discuss financial contribution to the gravel resheeting of this section of road as well as the timing of works and any payments with Council.

- 90 degree bends

  APA notes the 90 degree bends and will ensure the Traffic Management Plan for construction specifically address these locations, including reducing speed at these locations during construction, and temporary traffic control measures when oversize vehicles use this section of road. Given the small increase in operation traffic and the management of construction through the TMP, APA does not propose that an upgrade of these corners is warranted.

Issue – Site entry / exit

LSC states that currently entry and exit points for the site are non-existent. Further, improvements should be considered for the entry / exit to the site compound and take into consideration access for long vehicle freight, drainage, site distances and fence / gate setbacks.

Response

APA proposes to utilise the access to the existing scraper station located on Lot 1 DP580284. This access is within the existing APA easement for the Moomba to Wilton Pipeline.

Additional works are proposed to this turn and could include the addition of wider gates and construction of a culvert to allow for adequate drainage. APA will obtain a permit in accordance with Section 138 of the Roads Act. Any proposed works would be discussed with LSC prior to commencement.

Appendix B

Oversize/ Overmass vehicle routes assessment

East Coast Grid Expansion - Stage 1 MW880

OSOM vehicle route assessment

Prepared for APA Group
December 2021

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East Coast Grid Expansion - Stage 1 MW880

OSOM vehicle route assessment

Report Number

J200919 24

Client

APA Group

Date

10 December 2021

Version

v2 Final

Prepared by

Eric Lei
Traffic Engineer
10 December 2021

Approved by

Tim Brooker
National Technical Leader - Traffic & Transport
10 December 2021

Table of Contents

Attachments

Tables

Figures

1 Introduction

EMM Consulting Pty Limited (EMM) has been engaged by APA Group (APA) to prepare a desktop Over Size Over Mass (OSOM) vehicle route assessment for the transport of compressor station components (packages) to MW880 (Milne) from the key strategic points at Port Botany, Port of Newcastle and Dubbo. The construction of a compressor station at MW880 comprises part of Stage 1 of the East Coast Grid Expansion, which will increase gas transportation capacity on the Moomba to Wilton Pipeline (MWP) in NSW.

The site is located on Lot 1 DP580284, approximately 35 km south-west of Condobolin. No site inspection has been undertaken as part of this OSOM assessment, therefore recommendations are based on desktop information only.

For any OSOM vehicle route approval, an application should be lodged with the National Heavy Vehicle Regulator (NHVR)[1].

[1] https://www.nhvr.gov.au/road-access/access-management/applications/oversize-overmass-permit

2 Package details

The compressor station would be constructed from six packages:

- One package of 14.6 m long, 5.2 m wide, 3.5 m high and a weight of 42 t;
- One package of 12 m long, 5.2 m wide, 3.5 m high and a weight of 42 t; and
- Four packages of 12 m long, 2.35 m wide, 2.2 m high and a weight of 6 t.

The two packages that are 5.2 m wide will require OSOM vehicle transport.

The transport configuration includes a tractor, 2 x 8 widening dolly and a 6 x 8 platform. The overall dimensions with package are 30.213 m long, 5.2 m wide and 4.59 m high.

A pilot vehicle will be required along the route.

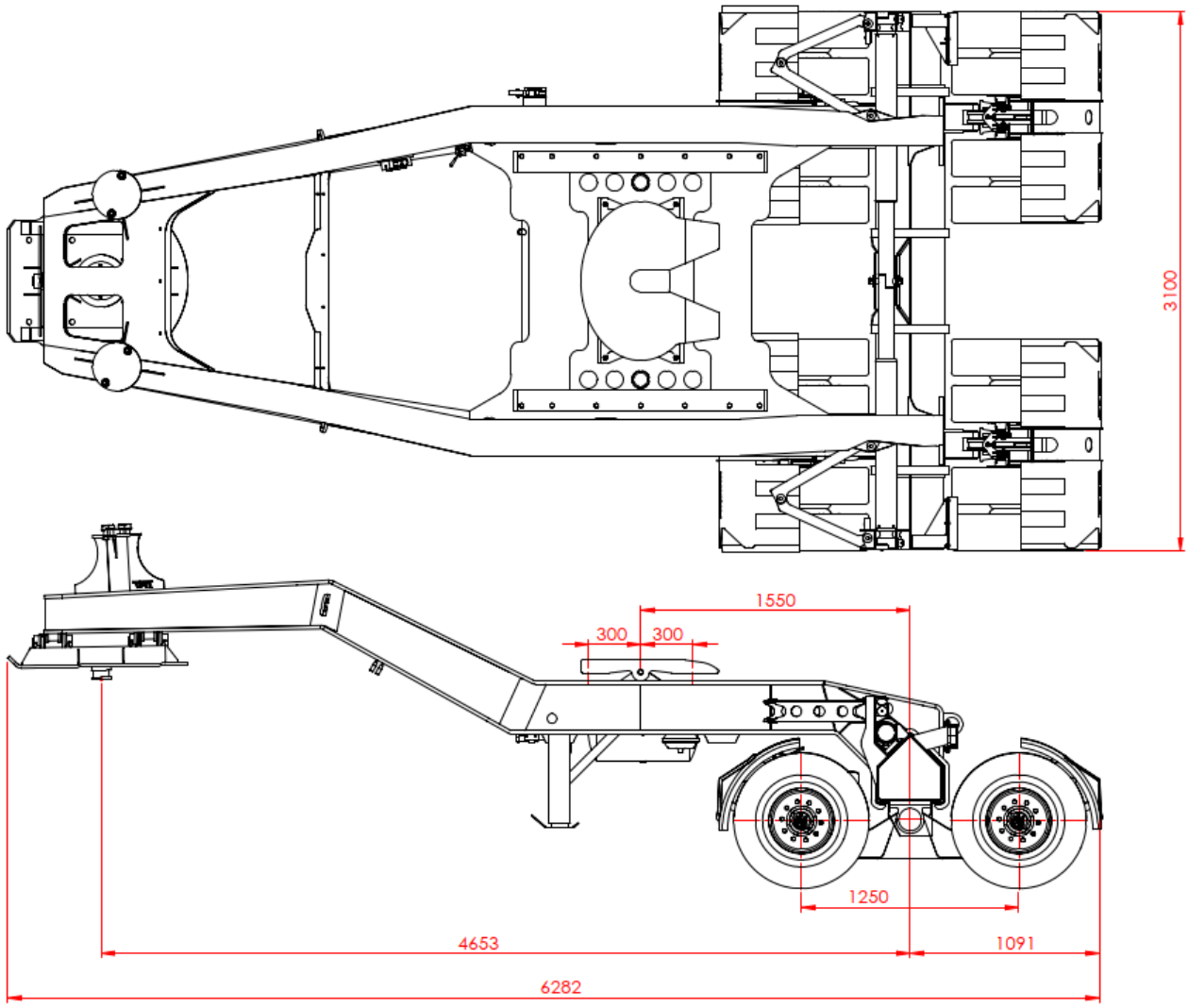


Figure 2.1 Dolly configuration

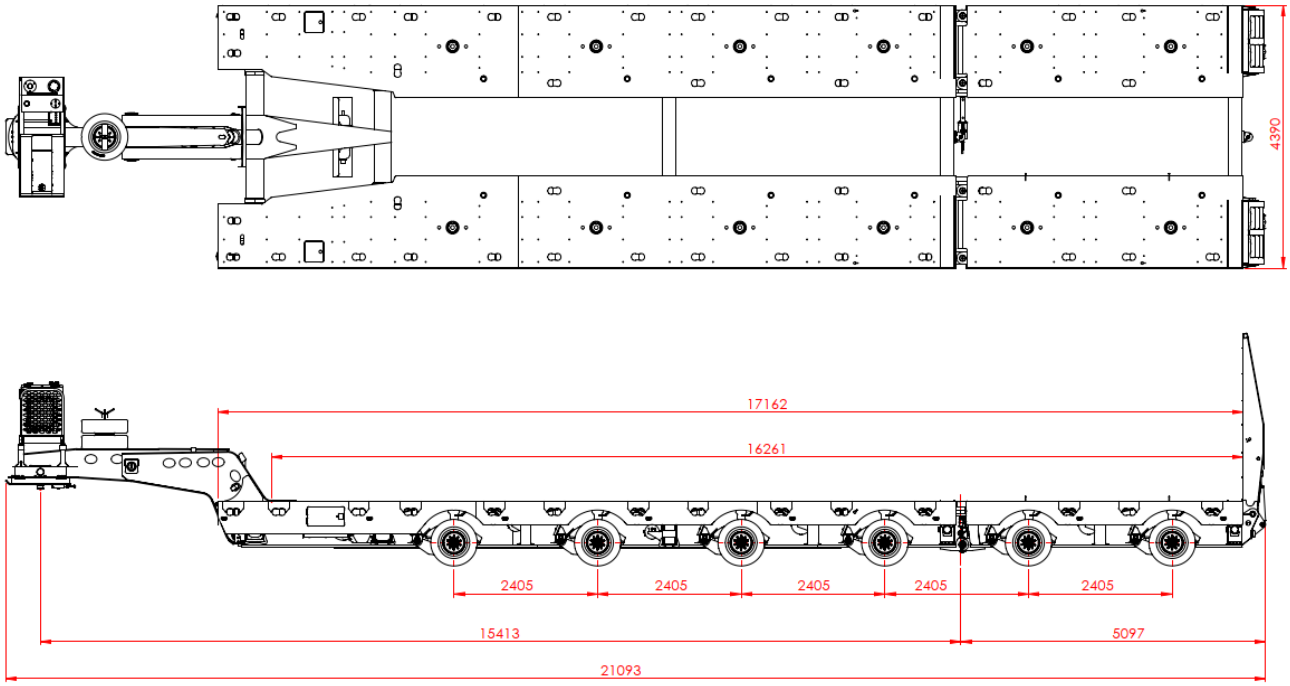


Figure 2.2 **Platform trailer configuration**

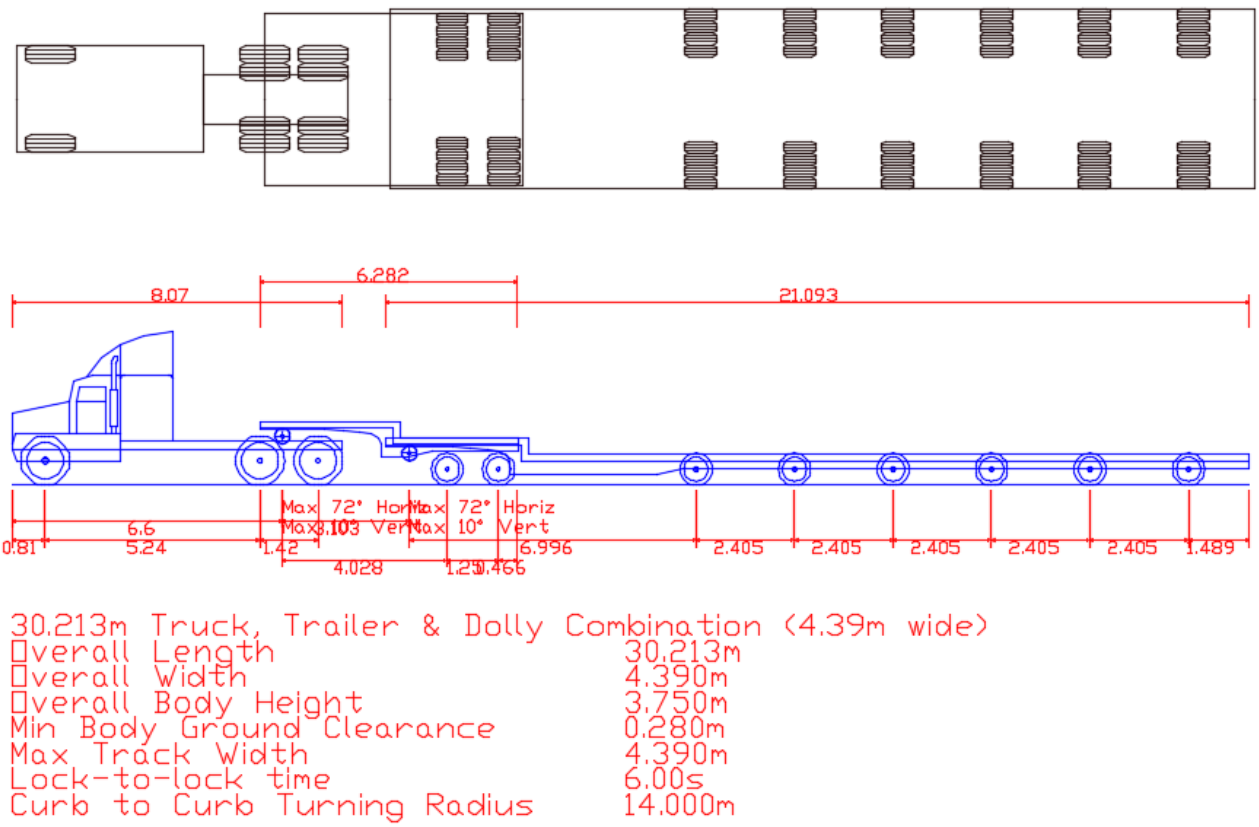


Figure 2.3 **OSOM vehicle configuration**

3 Route study

3.1 Potential routes

The OSOM routes to MW880 included in this assessment originate from Port Botany, Port of Newcastle, and Dubbo. The exact source of packages is yet to be confirmed; hence analysis has been undertaken for two possible ports in NSW. The route from Port of Newcastle passes through Dubbo, therefore a separate assessment for Dubbo is not required. The NSW OSOM website[2] presents the approved routes for OSOM vehicles up to 30 m long, 5 m wide and 5 m high, this study assesses the following three likely routes:

- Route 1: Port Botany -> Goulburn -> Cowra -> Ungarie -> The site (630 km);
- Route 2: Port Botany -> Bathurst -> Parkes -> Condobolin -> The site (517 km); and
- Route 3: Port of Newcastle -> Dunedoo -> Dubbo -> Parkes -> Condobolin -> The site (642 km).

Two options have been examined from Port Botany, one via Goulburn (Route 1) and another via Bathurst (Route 2). Route 3 (Port of Newcastle to the site) traverse through Dubbo

The routes under consideration are approved for vehicles up to 4.6 m high. Since the proposed OSOM vehicle is 4.59 m high with the package, the height clearance will not need to be assessed.

3.2 Route 1: Port Botany to the site via Goulburn

The route from Port Botany to the site via Goulburn is shown in Figure 3.1. The figure shows that the route primarily follows the arterial road network.

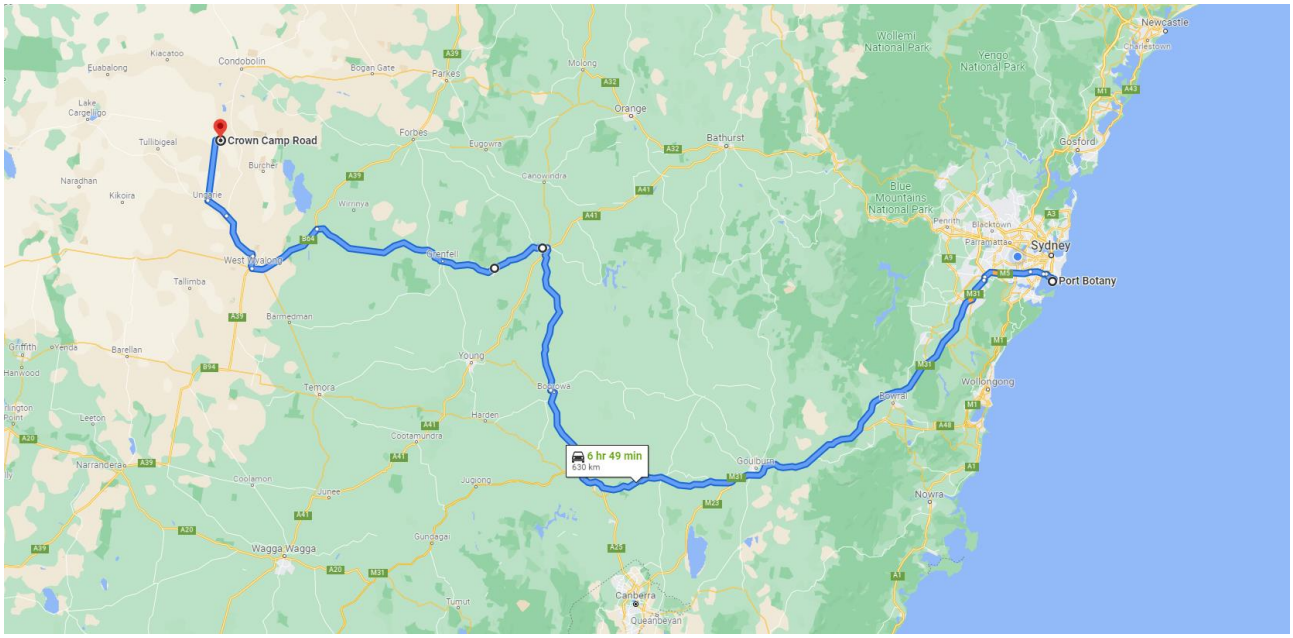


Figure 3.1 Route 1 from Port Botany via Goulburn

[2] https://roads-waterways.transport.nsw.gov.au/business-industry/heavy-vehicles/maps/nsw-load-carrying-network/map/index.html

This 630 km route is comprised of Port Botany to Friendship Road, Bumborah Point Road, Botany Road, Foreshore Road, General Homes Drive, M5 East, South Western Motorway (M5), Hume Motorway (M31), Hume Highway (M31), Lachlan Valley Way, Marsden Street, Murringo Road, Lachlan Valley Way, Mid Western Highway, Newell Highway, Ungarie Road, West Wyalong Condobolin Road, Lake Road, and Crown Camp Road to site.

A swept path assessment has been undertaken for all critical turning movements along the route to ensure manoeuvrability for the 5.2 m wide vehicle. It is generally assumed that roads surrounding the port and the arterial road networks on various directions out of Sydney are adequate for OSOM vehicles, therefore for simplicity, our assessment has excluded roads in the Sydney area.

The swept path assessment and respective key actions are outlined in Table 3.1.

Table 3.1 Key locations on Route 1

Chainage	Suburb	Location	Drawing reference	Turning occurs correct side of the road? (Yes/ No)	Road infrastructure affected?	Traffic control required?
279 km	Bowning	Hume Highway/Lachlan Valley Way	EMM-001	Yes	No	Yes, traffic control along the entire travel length of Lachlan Valley Way
324 km	Boorowa	Marsden Street/Pudman Street	EMM-002	Yes	No	Yes, traffic control along the entire travel length of Marsden Street
326 km	Boorowa	Murringo Road/Lachlan Valley Way	EMM-003	Yes	No	Yes, traffic control along the entire travel length of Murringo Road and Lachlan Valley Way
398 km	Cowra	Grenfell Road/Lachlan Valley Way	EMM-004	No	No	Yes, traffic control along the entire travel length of Lachlan Valley Way
453 km	Grenfell	Camp Street/Weddin Street	EMM-005	Yes	No	Yes, traffic control along the entire travel length of Camp Street
520 km	Caragabal	Newell Highway/Mid Western Highway	EMM-006	No	No	Yes, traffic control along the entire travel length of Mid-Western Highway and Newell Highway
557 km	West Wyalong	Main Street/Church Street	EMM-007	Yes	No	Yes, traffic control along the entire travel length of Main Street
557 km	West Wyalong	Main Street/Ungarie Road	EMM-008	Yes	No	Yes, traffic control along the entire travel length of Main Street and Ungarie Road
599 km	Ungarie	Wollongough Street/Mackrell Street	EMM-009	No	No	Yes, traffic control along the entire travel length of Wollongough Street and Mackrell Street
627 km	Condobolin	Crown Camp Road/West Milby Lane	EMM-010	Yes	No	Yes, traffic control along the entire travel length of Crown Camp Road

Route summary:

- General longitudinal slope: suitable for OSOM vehicle access;
- Bends: suitable for OSOM vehicle access, no significant tight bends have been identified;
- Any overhead structure: no, the prescribed route is approved for vehicles up to 4.6 m high;
- Total affected intersections which require traffic control: traffic control required starting from Lachlan Valley Way in Bowning;
- Total affected intersections that require replacement of road infrastructure or police escort: No road infrastructure is affected; and
- No of bridges affected: No bridges with significant load limits are identified along the route.

3.3 Route 2: Port Botany to the site via Bathurst

The Route 2 is presented in Figure 3.2.

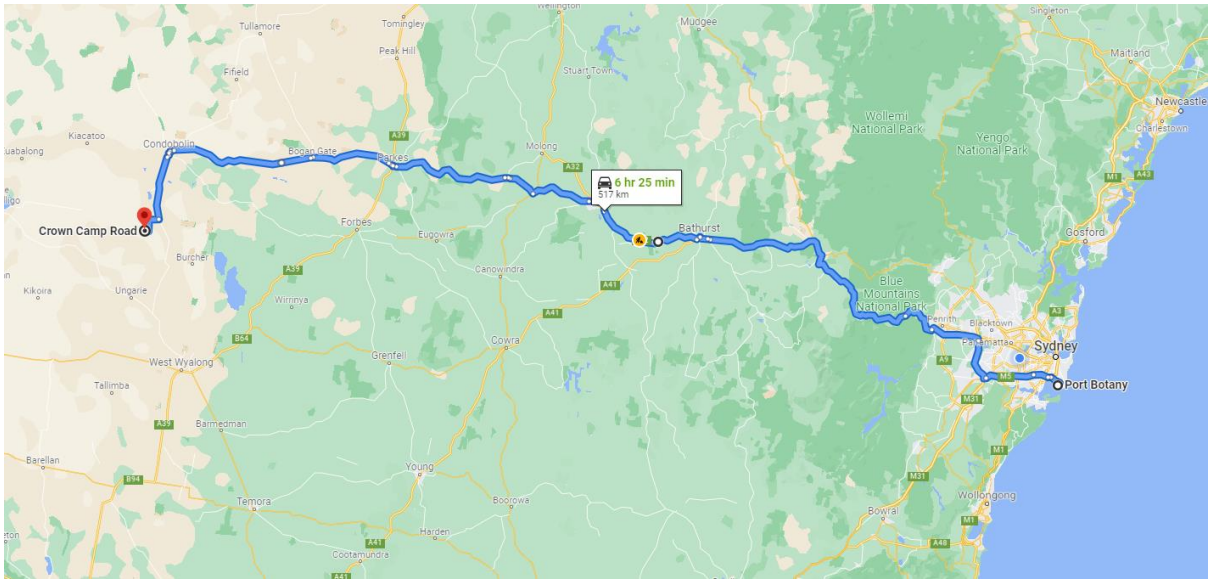


Figure 3.2 Route 2 from Port Botany via Bathurst

This 517 km route is comprised of Port Botany to Friendship Road, Bumborah Point Road, Botany Road, Foreshore Road, General Homes Drive, M5 East, South Western Motorway (M5), [3]*Westlink (M7), Western Motorway (M4), Great Western Highway, Mitchell Highway, Northern Distributor Road, Dalton Road, Forbes Road, The Escort Way, Henry Parkes Way, Parkes Road, Station Street, Denison Street, Lachlan Street, The Gipps Way, and Crown Camp Road*.

Swept path assessment has been undertaken for all critical turning movements along the route to ensure manoeuvrability for the 5.2 m wide vehicle. Similar to Route 1, it is generally assumed that roads surrounding the port and the arterial road networks on various directions out of Sydney are adequate for OSOM vehicles, therefore for simplicity, our assessment has excluded roads in the Sydney area.

[3] Italic means changes from Route 1

Table 3.2 Key locations on Route 2

Chainage	Suburb	Location	Drawing reference	Turning occurs correct side of the road? (Yes/ No)	Road infrastructure affected?	Traffic control required?
219 km	Bathurst	Durham Street/Stewart Street	EMM-101	Yes	No	Yes, traffic control along travel route of Great Western Highway west of Wallerawang
221 km	Bathurst	Stewart Street/Brilliant Street	EMM-102	Yes	No	No
268 km	Orange	Mitchell Highway/Northern Distributor Road	EMM-103	Yes	No	Yes, traffic control along the entire travel route of Mitchell Highway
272 km	Orange	Northern Distributor Road/Orhir Road	EMM-104	Yes	No	Yes, traffic control along the entire travel route of Northern Distributor Road
275 km	Orange	Northern Distributor Road/Leeds Parade	EMM-105	Yes	No	Yes, traffic control along the entire travel route of Northern Distributor Road
278 km	Orange	Northern Distributor Road/Burrendong Way	EMM-106	Yes	No	Yes, traffic control along the entire travel route of Northern Distributor Road
279 km	Orange	Northern Distributor Road/Molong Road	EMM-107	Yes	No	Yes, traffic control along the entire travel route of Northern Distributor Road
281 km	Orange	The Escort Way/Northern Distributor Road	EMM-108	Yes	No	Yes, traffic control along the entire travel route of Northern Distributor Road and The Escort Way
305 km	Boree	The Escort Way/Henry Parkes Way	EMM-109	Yes	No	Yes, traffic control along the entire travel route of The Escort Way and Henry Parkes Way

Table 3.2 Key locations on Route 2

Chainage	Suburb	Location	Drawing reference	Turning occurs correct side of the road? (Yes/ No)	Road infrastructure affected?	Traffic control required?
319 km	Manildra	Orange Road right angle bend	EMM-110	No	No	Yes, traffic control along the entire travel route of Orange Road
319 km	Manildra	Orange Road/Kiewa Street	EMM-111	No	No	Yes, traffic control along the entire travel route of Orange Road
374 km	Parkes	Welcome Street/Lachlan Street	EMM-112	Yes	No	Yes, traffic control along the entire travel route of Welcome Street
374 km	Parkes	Bogan Street/Grenfell Street	EMM-113	Yes	Yes, parking will need to be temporarily removed	No
375 km	Parkes	Bogan Street/Bushman Street	EMM-114	No	Yes, parking will need to be temporarily removed, refuge island will be driven over	Yes, traffic control along the entire travel route of Bushman Street
376 km	Parkes	Condobolin Road/Bushman Street	EMM-115	No	No	Yes, traffic control along the entire travel route of Bushman Street and Condobolin Street
475 km	Condobolin	Station Street/Molong Street	EMM-116	No	No	Yes, traffic control along the entire travel route of Station Street and Denison Street
476 km	Condobolin	Denison Street/Lachlan Street	EMM-117	No	No	Yes, traffic control along the entire travel route of Denison Street
476 km	Condobolin	William Street/Lachlan Street	EMM-118	No	No	Yes, traffic control along the entire travel route of William Street
478 km	Condobolin	Lachlan Valley Way/The Gipps Way	EMM-119	No	No	Yes, traffic control along the entire travel route of Lachlan Valley Way and The Gipps Way

Table 3.2 Key locations on Route 2

Chainage	Suburb	Location	Drawing reference	Turning occurs correct side of the road? (Yes/ No)	Road infrastructure affected?	Traffic control required?
506 km	Condobolin	The Gipps Way/Crown Camp Road	EMM-120	No	No	Yes, traffic control along the entire travel route of The Gipps Way and Crown Camp Road
510 km	Condobolin	Crown Camp Road/Salters Road	EMM-121	No	No	Yes, traffic control along the entire travel route of Crown Camp Road
515 km	Condobolin	Crown Camp Road/Site Access	EMM-122	No	No	Yes, traffic control along the entire travel route of Crown Camp Road

Route summary:

- General longitudinal slope: suitable for OSOM vehicle access; typically flat;
- Bends: all moderate bends which are suitable for OSOM vehicle access;
- Any overhead structure: this route has sufficient clearance for vehicles up to 4.6 m high
- Total affected intersections which require traffic control: traffic control required starting from Great Western Highway in Wallerawang
- Total affected intersections that require replacement of road infrastructure or police escort: no road infrastructure replacement required but some parking will need to be temporarily removed, subject to TfNSW/ local council's approval;
- No of bridges affected: No bridges with significant load limits are identified along the route

Route 1 is 113 km longer than Route 2 which is 22% extra travel distance. As both routes are similar in nature in terms of the level of traffic control required and road infrastructure, Route 2 is the desirable route from Port Botany. However, in Route 2 some parking will need to be removed which would require relevant authorities' approval.

3.4 Route 3: Port of Newcastle to the site via Dubbo

Route 3 (Port of Newcastle to site via Dubbo) is shown in Figure 3.3.

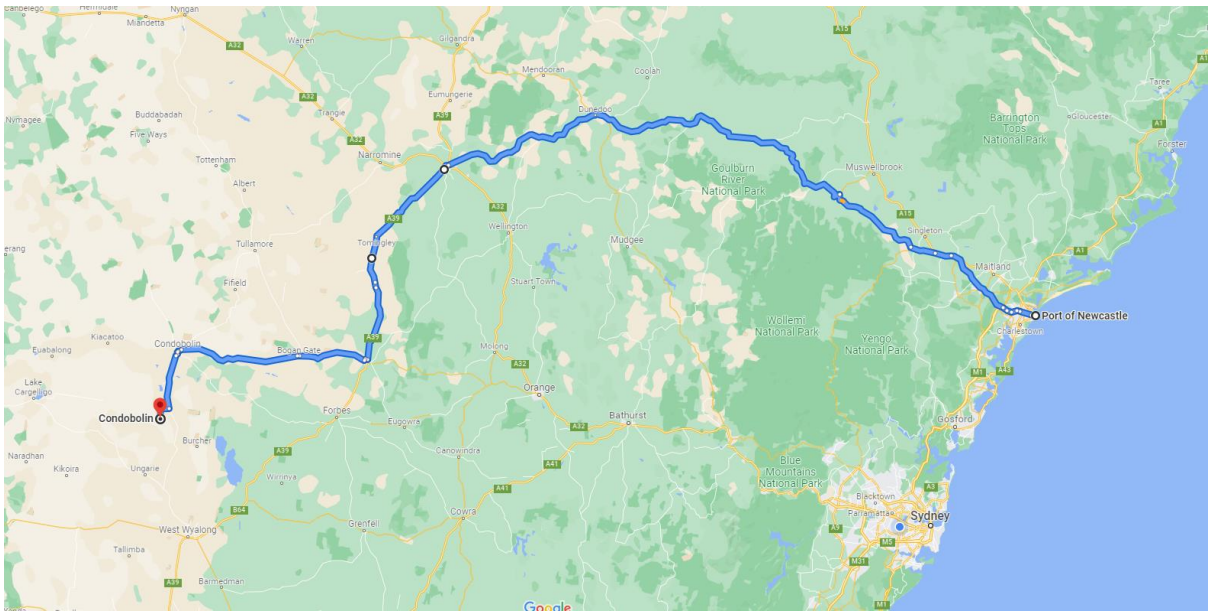


Figure 3.3 Route 3 from Port of Newcastle via Dubbo

This 642 km route is comprised of Port of Newcastle to Darling Street, Parker Street, Elizabeth Street, Industrial Drive, Pacific Highway, New England Highway, John Renshaw Drive, Hunter Expressway (M15), New England Highway, Golden Highway, Castlereagh Highway, Golden Highway, Newell Highway, Henry Parkes Way, Parkes Road, Station Street, Denison Street, Lachlan Street, The Gipps Way and Crown Camp Road.

Swept path assessment has been undertaken for all critical turning movements along the route to ensure manoeuvrability for the 5.2 m wide vehicle. Similar to Sydney Ports, Port of Newcastle is surrounded by arterial road network which can accommodate OSOM vehicles, therefore, therefore assessment has excluded roads in the City of Newcastle .

Table 3.3 Key locations on Route 3

Chainage	Suburb	Location	Drawing reference	Turning occurs correct side of the road? (Yes/ No)	Road infrastructure affected?	Traffic control required?
68 km	Whittingham	New England Highway/Mitchell Line of Road	EMM-201	Yes	No	Yes, traffic control along New England Highway west of Belford and along Mitchell Line of Road
78 km	Mount Thorley	Putty Road/Michell Line of Road	EMM-202	Yes	No	Yes, traffic control along the entire length of Mitchell Line of Road and Putty Road

Table 3.3 Key locations on Route 3

Chainage	Suburb	Location	Drawing reference	Turning occurs correct side of the road? (Yes/ No)	Road infrastructure affected?	Traffic control required?
82 km	Mount Thorley	Putty Road/Mount Thorley Road	EMM-203	Yes	No	Yes, traffic control along the entire length of Putty Road and Mount Thorley Road/Golden Highway
108 km	Jerrys Plains	Lonsdale Street/Pagan Street	EMM-204	No	No	Yes, traffic control along the entire length of Lonsdale Street
108 km	Jerrys Plains	Lonsdale Street/Pringle Street	EMM-205	No	No	Yes, traffic control along the entire length of Lonsdale Street
133 km	Denman	Denman Road/Jerrys Plains Road	EMM-206	No	No	Yes, traffic control along the entire length of Jerrys Plains Road and Denman Road
136 km	Denman	Palace Street/Crinoline Street	EMM-207	No	No	Yes, traffic control along the entire length of Palace Street
187 km	Merriwa	Bettington Street/Vennacher Street	EMM-208	No	Yes, refuge island may need to be temporarily removed.	Yes, traffic control along the entire length of Bettington Street
187 km	Merriwa	Bettington Street/Dutton Street	EMM-209	No	No	Yes, traffic control along the entire length of Bettington Street
292 km	Dunedoo	Sullivan Street/Bolaro Street	EMM-210	No	No	Yes, traffic control along the entire length of Sullivan Street
379 km	Dubbo	Cobbora Road/Wheelers Lane	EMM-211	Yes	No	Yes, traffic control along the entire length of Cobbora Road
380 km	Dubbo	Cobbora Road/Myall Street	EMM-212	Yes	No	Yes, traffic control along the entire length of Cobbora Road

Table 3.3 Key locations on Route 3

Chainage	Suburb	Location	Drawing reference	Turning occurs correct side of the road? (Yes/ No)	Road infrastructure affected?	Traffic control required?
381 km	Dubbo	Cobbora Road/Fitzroy Street	EMM-213	Yes	No	Yes, traffic control along the entire length of Cobbora Road and Erskine Street
381 km	Dubbo	Erskine Street/Darling Street	EMM-214	Yes	No	Yes, traffic control along the entire length of Erskine Street
383 km	Dubbo	Whylandra Street/Victoria Street	EMM-215	Yes	No	Yes, traffic control along the entire length of Whylandra Street
499 km	Parkes	Peak Hill Road/Thomas Street	EMM-216	No	No	Yes, traffic control along the entire length of Peak Hill Road and Thomas Street
501 km	Parkes	Thomas Street/Moulden Street	EMM-217	No	No	Yes, traffic control along the entire length of Thomas Street and Moulden Street
502 km	Parkes	Back Trundle Road/Moulden Street	EMM-218	No	No	Yes, traffic control along the entire length of Moulden Street and Back Trundle Road
600 km	Condobolin	Station Street/Molong Street	EMM-116	No	No	Yes, traffic control along the entire travel route of Station Street and Denison Street
601 km	Condobolin	Denison Street/Lachlan Street	EMM-117	No	No	Yes, traffic control along the entire travel route of Denison Street
601 km	Condobolin	William Street/Lachlan Street	EMM-118	No	No	Yes, traffic control along the entire travel route of William Street
603 km	Condobolin	Lachlan Valley Way/The Gipps Way	EMM-119	No	No	Yes, traffic control along the entire travel route of Lachlan Valley Way and The Gipps Way

Table 3.3 Key locations on Route 3

Chainage	Suburb	Location	Drawing reference	Turning occurs correct side of the road? (Yes/ No)	Road infrastructure affected?	Traffic control required?
631 km	Condobolin	The Gipps Way/Crown Camp Road	EMM-120	No	No	Yes, traffic control along the entire travel route of The Gipps Way and Crown Camp Road
635 km	Condobolin	Crown Camp Road/Salters Road	EMM-121	No	No	Yes, traffic control along the entire travel route of Crown Camp Road
640 km	Condobolin	Crown Camp Road/Unnamed road	EMM-122	No	No	Yes, traffic control along the entire travel route of Crown Camp Road

Route summary:

- General longitudinal slope: suitable for OSOM vehicle access, generally flat;
- Bends: no sharp bends, all bends are suitable for OSOM vehicle access
- Any overhead structure: no overhead structure will be affected as 4.6 m high will be achieved along the route;
- Total affected intersections which require traffic control: traffic control is required starting from New England Highway in Belford;
- Total affected intersections that require replacement of road infrastructure or police escort: yes, the refuge island at Bettington Street/Vennacher Street, Merriwa may need to be removed as vehicle would require to travel over it.
- No of bridges affected: No bridges with significant load limits are identified along the route

4 Conclusion

Based on the swept path assessment, the three possible routes that are currently approved for OSOM vehicles up to 5 m wide are also suitable for transport of the proposed packages that are up to 5.2 m wide.

This is a desktop assessment, hence a field survey may be required to accurately identify any road infrastructure that requires relocation to facilitate the OSOM from various locations, to/ from the site.

Based on the assessment, the shortest route from Port Botany is selected as Route 2 (via Bathurst) which has a lower travel distance. However, this route will require some temporary removal of on street parking, therefore Route 1 may provide a simpler route.

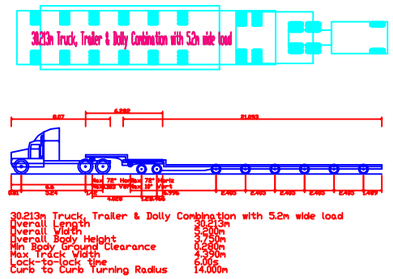
Necessary application will be required to be lodged to NHVR by the transport operator. Due to the excessive width of the vehicle, police escort may be required, subject to NHVR determination.

Attachment A

Swept path assessment

COMMENTS

A3



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PROJECT:
East Coast Grid Expansion - Stage 1
MW880 - OSOM Assessment

DRAWING TITLE:
Route 1 from Port Botany via Goulburn

Hume Highway/Lachlan Valley Way, Bowning

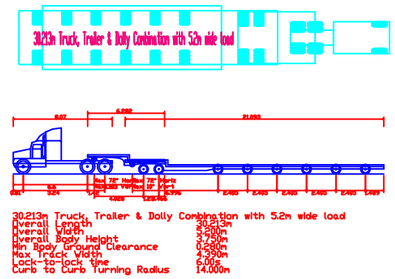
CLIENT:	APA Group
DRG. #:	EMM-001
PROJECT #:	J200919
SCALE:	1:500

REV: 1

PUDMAN STREET

COMMENTS

A3



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PROJECT:
East Coast Grid Expansion - Stage 1
MW880 - OSOM Assessment

DRAWING TITLE:
Route 1 from Port Botany via Goulburn

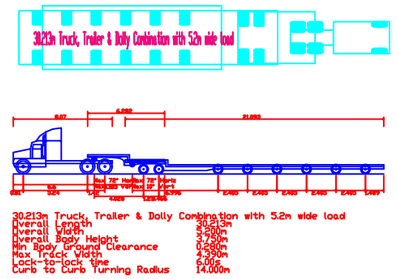
Marsden Street/Pudman Street, Boorowa

CLIENT:	APA Group
DRG. #:	EMM-002
PROJECT #:	J200919
SCALE:	1:500

REV: 1

COMMENTS

A3



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PROJECT:
East Coast Grid Expansion - Stage 1
MW880 - OSOM Assessment

DRAWING TITLE:
Route 1 from Port Botany via Goulburn

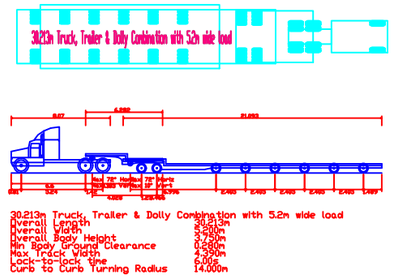
Murringo Road/Lachlan Valley Way, Boorowa

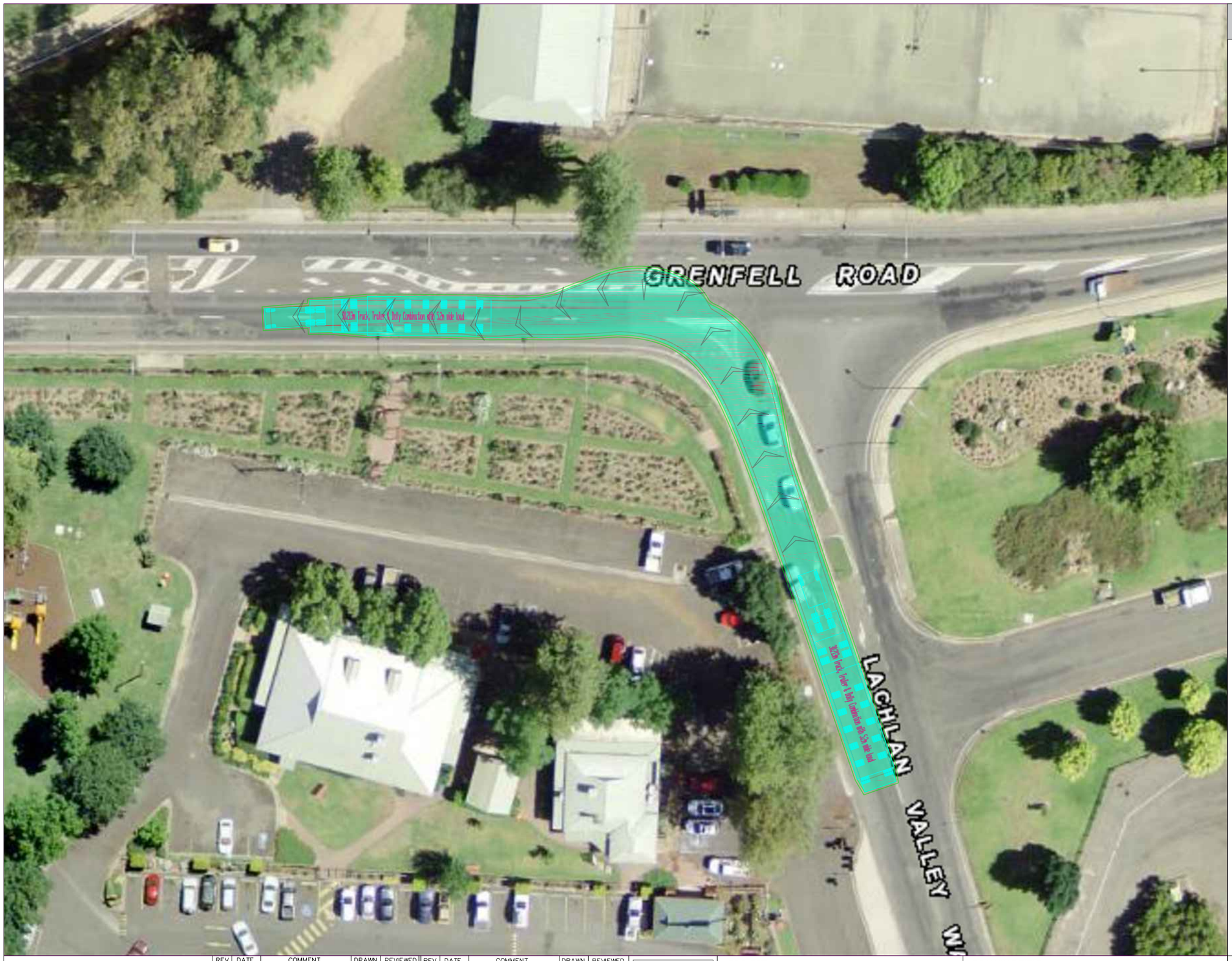
CLIENT:	APA Group
DRG. #:	EMM-003
PROJECT #:	J200919
SCALE:	1:500

REV: 1

COMMENTS

A3





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PROJECT:
East Coast Grid Expansion - Stage 1
MW880 - OSOM Assessment

DRAWING TITLE:
Route 1 from Port Botany via Goulburn

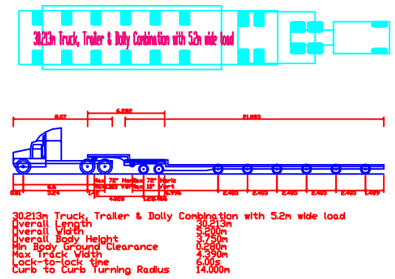
Greenfell Road/Lachlan Valley Way, Cowra

CLIENT:	APA Group
DRG. #:	EMM-004
PROJECT #:	J200919
SCALE:	1:500

REV: 1

COMMENTS

A3



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PROJECT:
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MW880 - OSOM Assessment

DRAWING TITLE:
Route 1 from Port Botany via Goulburn

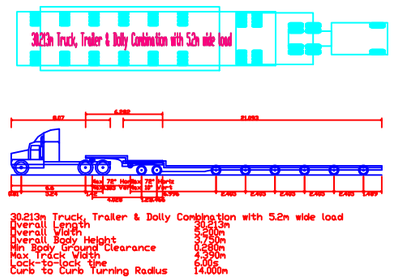
Camp Street/Weddin Street, Greenfell

CLIENT:	APA Group
DRG. #:	EMM-005
PROJECT #:	J200919
SCALE:	1:500

REV: 1

COMMENTS

A3



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PROJECT:
East Coast Grid Expansion - Stage 1
MW880 - OSOM Assessment

DRAWING TITLE:
Route 1 from Port Botany via Goulburn

Newell Highway/Mid Western Highway, Caragabal

CLIENT:	APA Group
DRG. #:	EMM-006
PROJECT #:	J200919
SCALE:	1:500

REV: 1

COMMENTS

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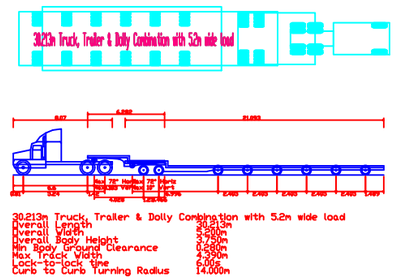

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PROJECT:
East Coast Grid Expansion - Stage 1
MW880 - OSOM Assessment

DRAWING TITLE:
Route 1 from Port Botany via Goulburn

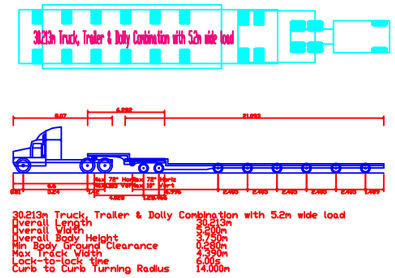
Main Street/Church Street, West Wyalong

CLIENT:	APA Group
DRG. #:	EMM-007
PROJECT #:	J200919
SCALE:	1:500

REV: 1

COMMENTS

A3



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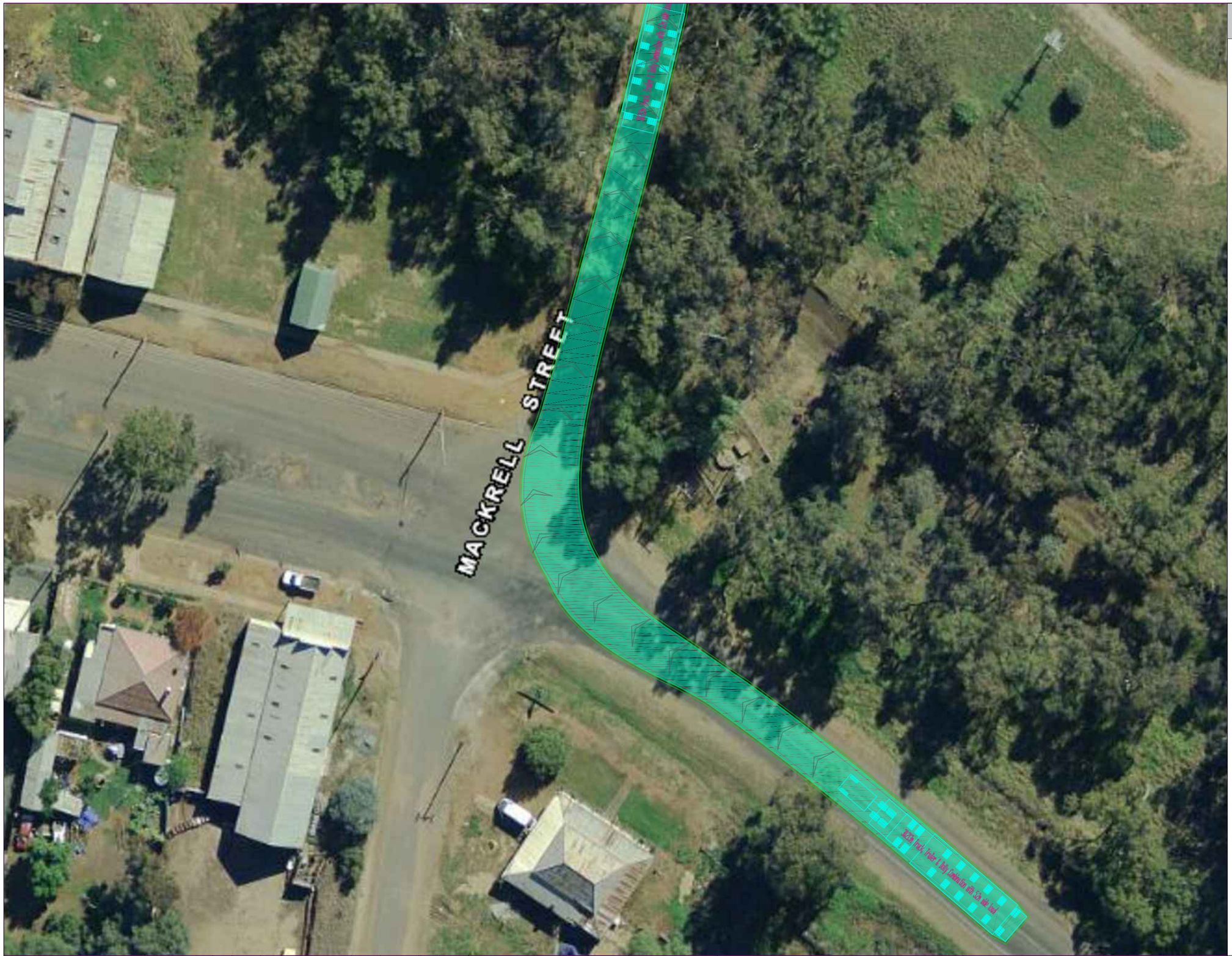
PROJECT:
East Coast Grid Expansion - Stage 1
MW880 - OSOM Assessment

DRAWING TITLE:
Route 1 from Port Botany via Goulburn

Main Street/Ungarie Road, West Wyalong

CLIENT:	APA Group
DRG. #:	EMM-008
PROJECT #:	J200919
SCALE:	1:500

REV: 1



COMMENTS

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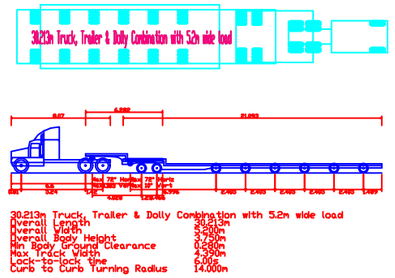

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PROJECT:
East Coast Grid Expansion - Stage 1
MW880 - OSOM Assessment

DRAWING TITLE:
Route 1 from Port Botany via Goulburn

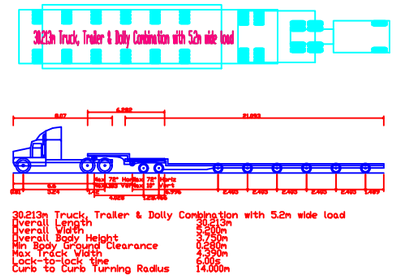
Wollongough Street/Mackrell Street, Ungarie

CLIENT:	APA Group
DRG. #:	EMM-009
PROJECT #:	J200919
SCALE:	1:500

REV: 1

COMMENTS

A3



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PROJECT:
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MW880 - OSOM Assessment

DRAWING TITLE:
Route 1 from Port Botany via Goulburn

Crown Camp Road, Condobolin

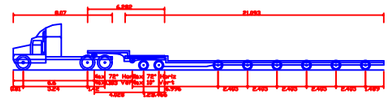
CLIENT:	APA Group
DRG. #:	EMM-010
PROJECT #:	J200919
SCALE:	1:500

REV: 1

DURHAM STREET

COMMENTS

A3



30.213m Truck, Trailer & Dolly Combination with 5.2m wide load

Overall Length	30.213m
Overall Width	5.200m
Overall Body Height	4.300m
Min Body Ground Clearance	0.600m
Max Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	14.000m

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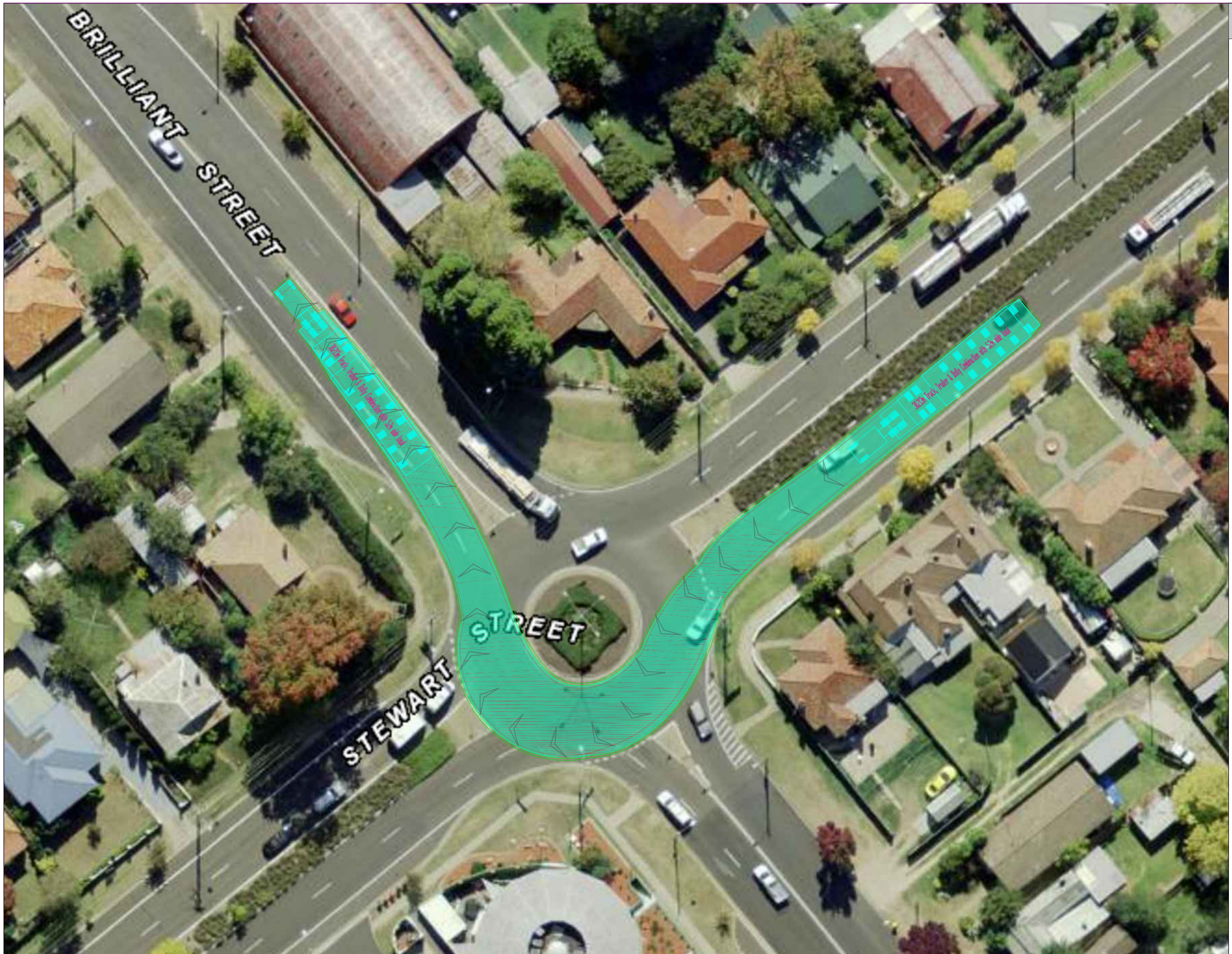
PROJECT:
East Coast Grid Expansion - Stage 1
MW880 - OSOM Assessment

DRAWING TITLE:
Route 2 from Port Botany via Bathurst

Durham Street/Stewart Street, Bathurst

CLIENT:	APA Group
DRG. #:	EMM-101
PROJECT #:	J200919
SCALE:	1:500

REV: 1



COMMENTS

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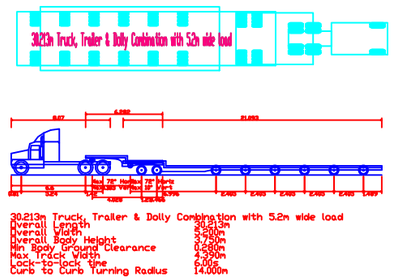

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REV	DATE	COMMENT	DRAWN	REVIEWED

PROJECT:
East Coast Grid Expansion - Stage 1
MW880 - OSOM Assessment

DRAWING TITLE:
Route 2 from Port Botany via Bathurst

Stewart Street/Brilliant Street, Bathurst

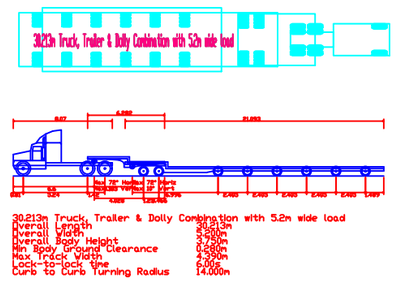
CLIENT:	APA Group
DRG. #:	EMM-102
PROJECT #:	J200919
SCALE:	1:500

REV: 1

NORTHERN DISTRIBUTOR ROAD

COMMENTS

A3



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REV	DATE	COMMENT	DRAWN	REVIEWED

PROJECT:
East Coast Grid Expansion - Stage 1
MW880 - OSOM Assessment

DRAWING TITLE:
Route 2 from Port Botany via Bathurst

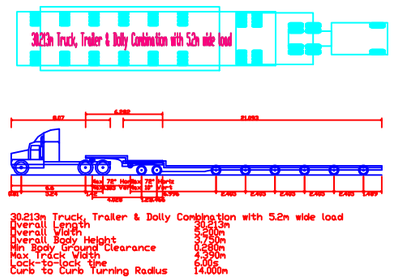
Mitchell Highway/Northern Distributor Road, Orange

CLIENT:	APA Group
DRG. #:	EMM-103
PROJECT #:	J200919
SCALE:	1:500

REV: 1

COMMENTS

A3



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MW880 - OSOM Assessment

DRAWING TITLE:
Route 2 from Port Botany via Bathurst

Northern Distributor Road/Orhir Road, Orange

CLIENT:	APA Group
DRG. #:	EMM-104
PROJECT #:	J200919
SCALE:	1:500

REV: 1

COMMENTS

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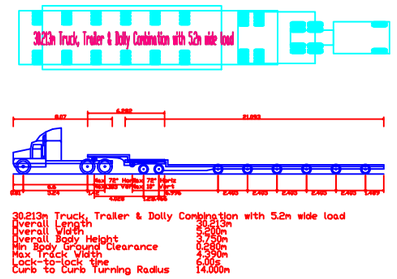

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PROJECT:
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MW880 - OSOM Assessment

DRAWING TITLE:
Route 2 from Port Botany via Bathurst

Northern Distributor Road/Leeds Parade, Orange

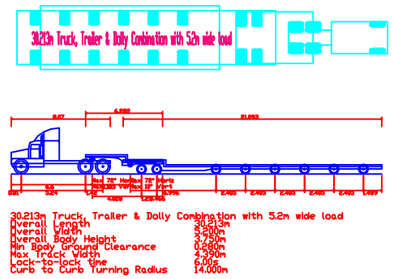
CLIENT:	APA Group
DRG. #:	EMM-105
PROJECT #:	J200919
SCALE:	1:500

REV: 1

NORTHERN DISTRIBUTOR ROAD

COMMENTS

A3



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REV	DATE	COMMENT	DRAWN	REVIEWED

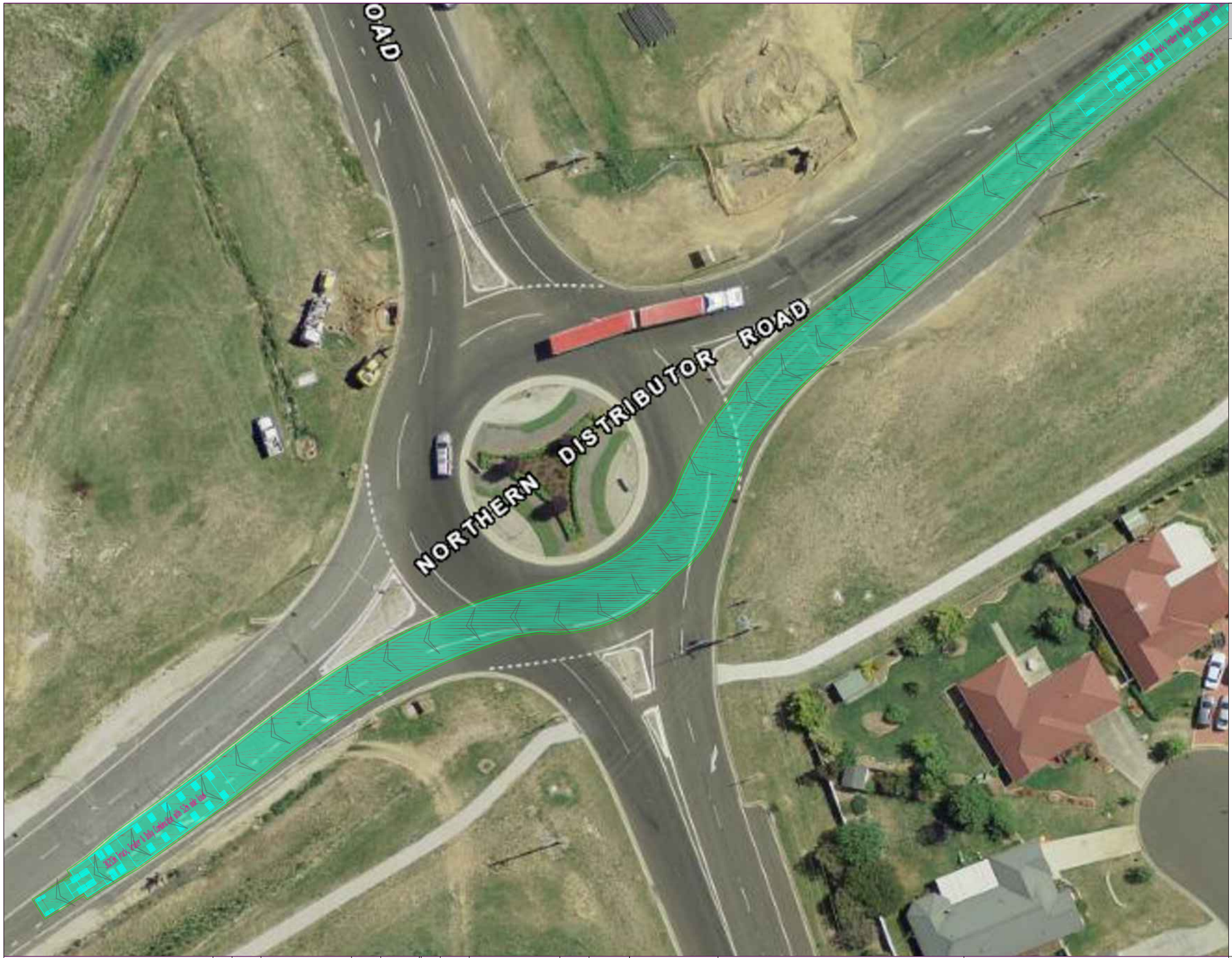
PROJECT:
East Coast Grid Expansion - Stage 1
MW880 - OSOM Assessment

DRAWING TITLE:
Route 2 from Port Botany via Bathurst

Northern Distributor Road/Burrendong Way, Orange

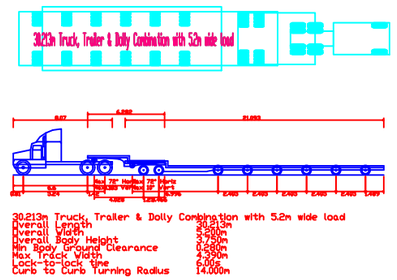
CLIENT:	APA Group
DRG. #:	EMM-106
PROJECT #:	J200919
SCALE:	1:500

REV: 1



COMMENTS

A3



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REV	DATE	COMMENT	DRAWN	REVIEWED

PROJECT:
East Coast Grid Expansion - Stage 1
MW880 - OSOM Assessment

DRAWING TITLE:
Route 2 from Port Botany via Bathurst

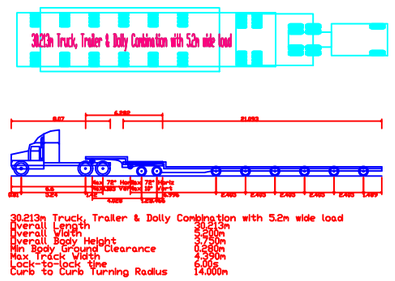
Northern Distributor Road/Molong Road, Orange

CLIENT:	APA Group
DRG. #:	EMM-107
PROJECT #:	J200919
SCALE:	1:500

REV: 1

COMMENTS

A3



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REV	DATE	COMMENT	DRAWN	REVIEWED

PROJECT:
East Coast Grid Expansion - Stage 1
MW880 - OSOM Assessment

DRAWING TITLE:
Route 2 from Port Botany via Bathurst

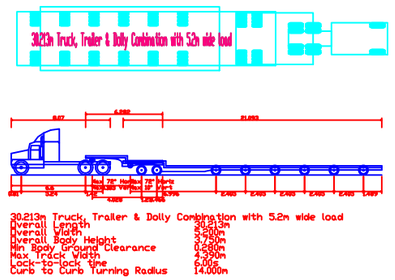
The Escort Way/Northern Distributor Road, Orange

CLIENT:	APA Group
DRG. #:	EMM-108
PROJECT #:	J200919
SCALE:	1:500

REV: 1

COMMENTS

A3



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PROJECT:
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MW880 - OSOM Assessment

DRAWING TITLE:
Route 2 from Port Botany via Bathurst

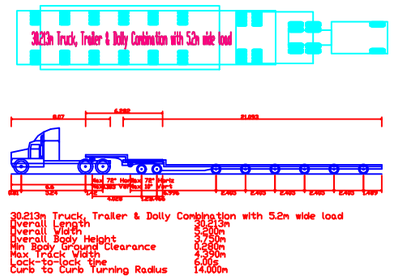
The Escort Way/Henry Parkes Way, Boree

CLIENT:	APA Group
DRG. #:	EMM-109
PROJECT #:	J200919
SCALE:	1:500

REV: 1

COMMENTS

A3



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REV	DATE	COMMENT	DRAWN	REVIEWED	REV	DATE	COMMENT	DRAWN	REVIEWED
1	19/11/21	FOR INFORMATION	EL	AU					

PROJECT:
East Coast Grid Expansion - Stage 1
MW880 - OSOM Assessment

DRAWING TITLE:
Route 2 from Port Botany via Bathurst

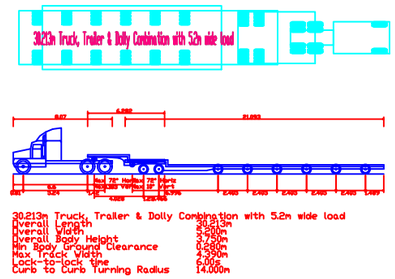
Orange Road, Manildra

CLIENT:	APA Group
DRG. #:	EMM-110
PROJECT #:	J200919
SCALE:	1:500

REV: 1

COMMENTS

A3



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1	19/11/21	FOR INFORMATION	EL	AU					

PROJECT:
East Coast Grid Expansion - Stage 1
MW880 - OSOM Assessment

DRAWING TITLE:
Route 2 from Port Botany via Bathurst

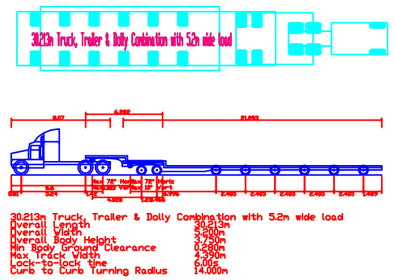
Orange Road/Kiewa Street, Manildra

CLIENT:	APA Group
DRG. #:	EMM-111
PROJECT #:	J200919
SCALE:	1:500

REV: 1

COMMENTS

A3



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1	19/11/21	FOR INFORMATION	EL	AU

REV	DATE	COMMENT	DRAWN	REVIEWED

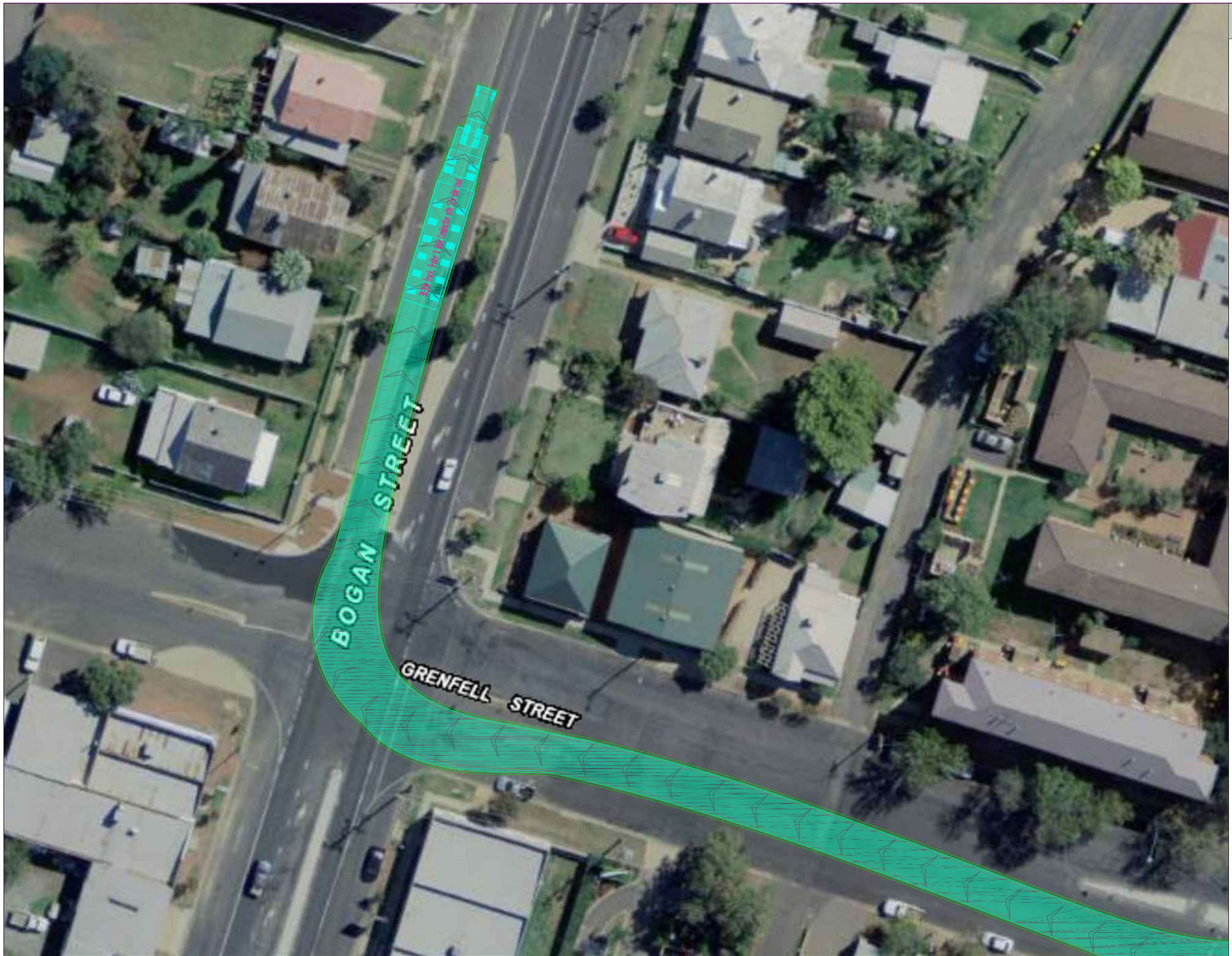
PROJECT:
East Coast Grid Expansion - Stage 1
MW880 - OSOM Assessment

DRAWING TITLE:
Route 2 from Port Botany via Bathurst

Welcome Street/Lachlan Street, Parkes

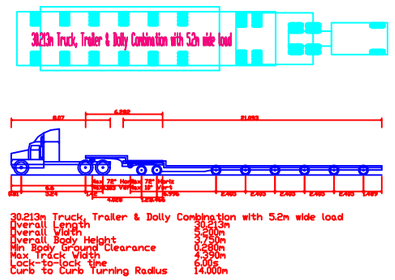
CLIENT:	APA Group
DRG. #:	EMM-112
PROJECT #:	J200919
SCALE:	1:500

REV: 1



COMMENTS

A3



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1	19/11/21	FOR INFORMATION	EL	AU

REV	DATE	COMMENT	DRAWN	REVIEWED

PROJECT:
East Coast Grid Expansion - Stage 1
MW880 - OSOM Assessment

DRAWING TITLE:
Route 2 from Port Botany via Bathurst

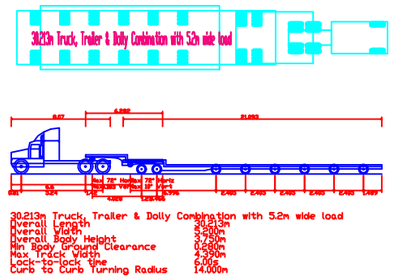
Bogan Street/Grenfell Street, Parkes

CLIENT:	APA Group
DRG. #:	EMM-113
PROJECT #:	J200919
SCALE:	1:500

REV: 1

COMMENTS

A3



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1	19/11/21	FOR INFORMATION	EL	AU					

PROJECT:
East Coast Grid Expansion - Stage 1
MW880 - OSOM Assessment

DRAWING TITLE:
Route 2 from Port Botany via Bathurst

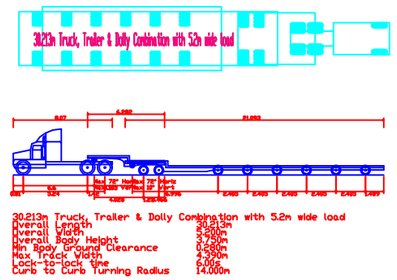
Bogan Street/Bushman Street, Parkes

CLIENT:	APA Group
DRG. #:	EMM-114
PROJECT #:	J200919
SCALE:	1:500

REV: 1

COMMENTS

A3



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1	19/11/21	FOR INFORMATION	EL	AU					

PROJECT:
East Coast Grid Expansion - Stage 1
MW880 - OSOM Assessment

DRAWING TITLE:
Route 2 from Port Botany via Bathurst

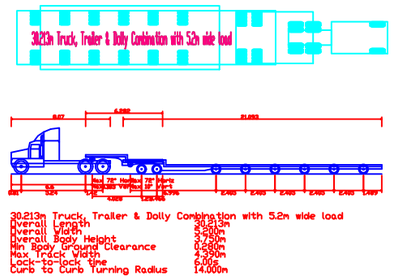
Condobolin Road/Bushman Street, Parkes

CLIENT:	APA Group
DRG. #:	EMM-115
PROJECT #:	J200919
SCALE:	1:500

REV: 1

COMMENTS

A3



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1	19/11/21	FOR INFORMATION	EL	AU					

PROJECT:
East Coast Grid Expansion - Stage 1
MW880 - OSOM Assessment

DRAWING TITLE:
Route 2 from Port Botany via Bathurst

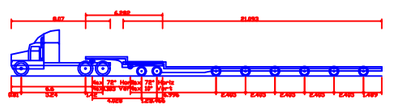
Station Street/Molong Street,
Condobolin

CLIENT:	APA Group
DRG. #:	EMM-116
PROJECT #:	J200919
SCALE:	1:500

REV: 1

COMMENTS

A3



30.213m Truck, Trailer & Dolly Combination with 5.2m wide load

Overall Length	30.213m
Overall Width	5.200m
Overall Body Height	4.300m
Min Body Ground Clearance	0.490m
Max Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	14.000m

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1	19/11/21	FOR INFORMATION	EL	AU

REV	DATE	COMMENT	DRAWN	REVIEWED

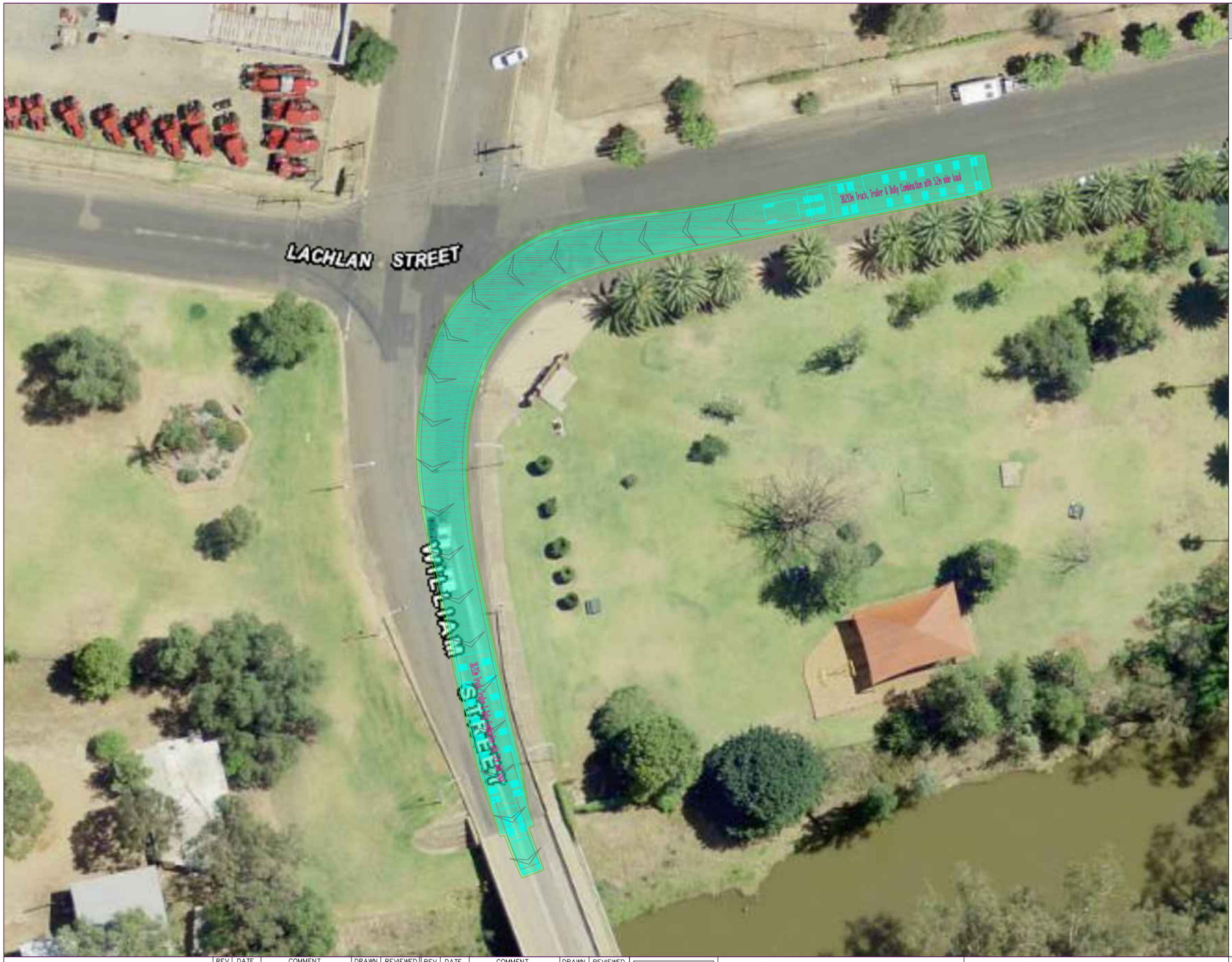
PROJECT:
East Coast Grid Expansion - Stage 1
MW880 - OSOM Assessment

DRAWING TITLE:
Route 2 from Port Botany via Bathurst

Denison Street, Condobolin

CLIENT:	APA Group
DRG. #:	EMM-117
PROJECT #:	J200919
SCALE:	1:500

REV: 1



COMMENTS

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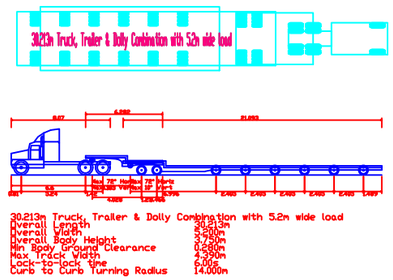

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1	19/11/21	FOR INFORMATION	EL	AU

REV	DATE	COMMENT	DRAWN	REVIEWED

PROJECT:
East Coast Grid Expansion - Stage 1
MW880 - OSOM Assessment

DRAWING TITLE:
Route 2 from Port Botany via Bathurst

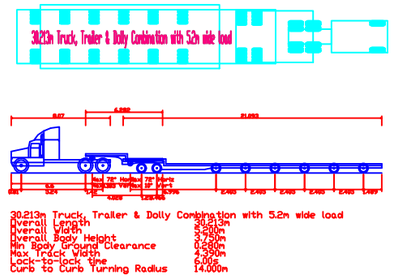
William Street/Lachlan Street,
Condobolin

CLIENT:	APA Group
DRG. #:	EMM-118
PROJECT #:	J200919
SCALE:	1:500

REV: 1

COMMENTS

A3



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PROJECT:
East Coast Grid Expansion - Stage 1
MW880 - OSOM Assessment

DRAWING TITLE:
Route 2 from Port Botany via Bathurst

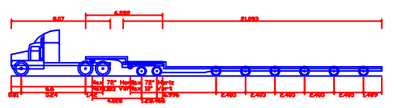
Lachlan Valley Way/The Gipps Way, Condobolin

CLIENT:	APA Group
DRG. #:	EMM-119
PROJECT #:	J200919
SCALE:	1:500

REV: 1

COMMENTS

A3



30.213m Truck, Trailer & Dolly Combination with 5.2m wide load

Overall Length	30.213m
Overall Width	5.200m
Overall Body Height	4.760m
Min Body Ground Clearance	1.060m
Max Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	14.000m

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REV	DATE	COMMENT	DRAWN	REVIEWED

PROJECT:
East Coast Grid Expansion - Stage 1
MW880 - OSOM Assessment

DRAWING TITLE:
Route 2 from Port Botany via Bathurst

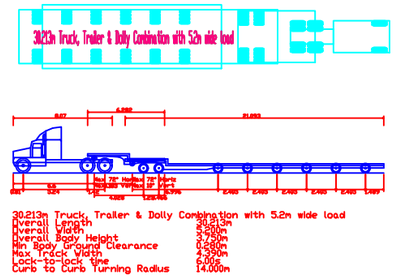
The Gipps Way/Crown Camp Road, Condobolin

CLIENT:	APA Group
DRG. #:	EMM-120
PROJECT #:	J200919
SCALE:	1:500

REV: 1

COMMENTS

A3



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1	19/11/21	FOR INFORMATION	EL	AU					

PROJECT:
East Coast Grid Expansion - Stage 1
MW880 - OSOM Assessment

DRAWING TITLE:
Route 2 from Port Botany via Bathurst

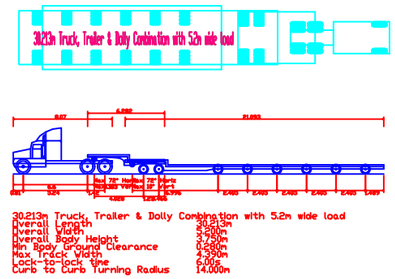
Crown Camp Road, Condobolin

CLIENT:	APA Group
DRG. #:	EMM-121
PROJECT #:	J200919
SCALE:	1:500

REV: 1

COMMENTS

A3



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1	19/11/21	FOR INFORMATION	EL	AU					

PROJECT:
East Coast Grid Expansion - Stage 1
MW880 - OSOM Assessment

DRAWING TITLE:
Route 2 from Port Botany via Bathurst

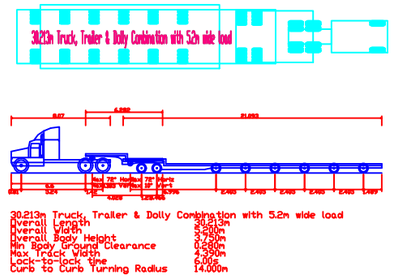
Crown Camp Road, Condobolin

CLIENT:	APA Group
DRG. #:	EMM-122
PROJECT #:	J200919
SCALE:	1:500

REV: 1

COMMENTS

A3



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1	19/11/21	FOR INFORMATION	EL	AU

REV	DATE	COMMENT	DRAWN	REVIEWED

PROJECT:
East Coast Grid Expansion - Stage 1
MW880 - OSOM Assessment

DRAWING TITLE:
Route from Newcastle Harbour

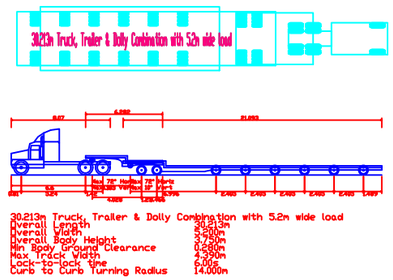
New England Highway/Mitchell Line of Road, Whittingham

CLIENT:	APA Group
DRG. #:	EMM-201
PROJECT #:	J200919
SCALE:	1:500

REV: 1

COMMENTS

A3



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PROJECT:
East Coast Grid Expansion - Stage 1
MW880 - OSOM Assessment

DRAWING TITLE:
Route from Newcastle Harbour

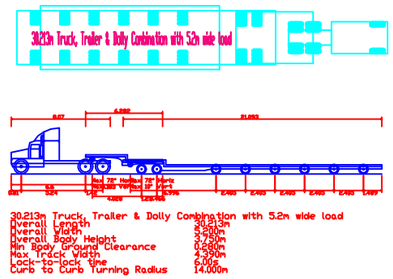
Putty Road/Mitchell Line of Road,
Mount Thorley

CLIENT:	APA Group
DRG. #:	EMM-202
PROJECT #:	J200919
SCALE:	1:500

REV: 1

COMMENTS

A3



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1	19/11/21	FOR INFORMATION	EL	AU					

PROJECT:
East Coast Grid Expansion - Stage 1
MW880 - OSOM Assessment

DRAWING TITLE:
Route from Newcastle Harbour

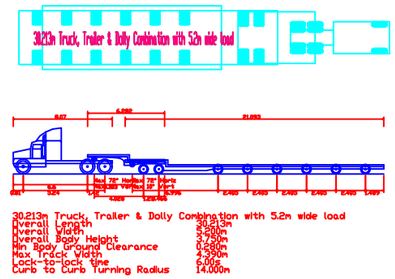
Putty Road/Mount Thorley Road, Mount Thorley

CLIENT:	APA Group
DRG. #:	EMM-203
PROJECT #:	J200919
SCALE:	1:500

REV: 1

COMMENTS

A3



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1	19/11/21	FOR INFORMATION	EL	AU					

PROJECT:
East Coast Grid Expansion - Stage 1
MW880 - OSOM Assessment

DRAWING TITLE:
Route from Newcastle Harbour

Lonsdale Street/Pagan Street, Jerrys Plains

CLIENT:	APA Group
DRG. #:	EMM-204
PROJECT #:	J200919
SCALE:	1:500

REV: 1

COMMENTS

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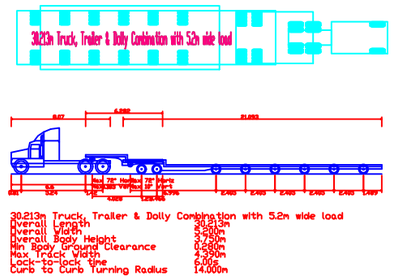

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1	19/11/21	FOR INFORMATION	EL	AU					

PROJECT:
East Coast Grid Expansion - Stage 1
MW880 - OSOM Assessment

DRAWING TITLE:
Route from Newcastle Harbour

Lonsdale Street/Pringle Street, Jerrys Plains

CLIENT:	APA Group
DRG. #:	EMM-205
PROJECT #:	J200919
SCALE:	1:500

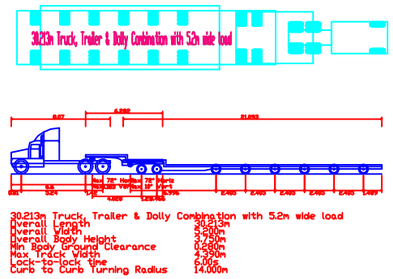
REV: 1

DENMAN ROAD

JERRYS PLAINS ROAD

COMMENTS

A3



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1	19/11/21	FOR INFORMATION	EL	AU					

PROJECT:
East Coast Grid Expansion - Stage 1
MW880 - OSOM Assessment

DRAWING TITLE:
Route from Newcastle Harbour

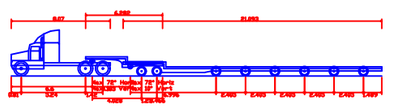
Denman Road/Jerrys Plains Road, Denman

CLIENT:	APA Group
DRG. #:	EMM-206
PROJECT #:	J200919
SCALE:	1:500

REV: 1

COMMENTS

A3



30.213m Truck, Trailer & Dolly Combination with 5.2m wide load

Overall Length	30.213m
Overall Width	5.200m
Overall Body Height	4.300m
Min Body Ground Clearance	0.460m
Max Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	14.000m

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1	19/11/21	FOR INFORMATION	EL	AU

REV	DATE	COMMENT	DRAWN	REVIEWED

PROJECT:
East Coast Grid Expansion - Stage 1
MW880 - OSOM Assessment

DRAWING TITLE:
Route from Newcastle Harbour

Palace Street/Crinoline Street, Denman

CLIENT: APA Group

DRG. #: EMM-207

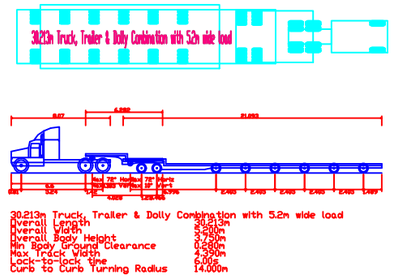
PROJECT #: J200919

SCALE: 1:500

REV: 1

COMMENTS

A3



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1	19/11/21	FOR INFORMATION	EL	AU					

PROJECT:
East Coast Grid Expansion - Stage 1
MW880 - OSOM Assessment

DRAWING TITLE:
Route from Newcastle Harbour

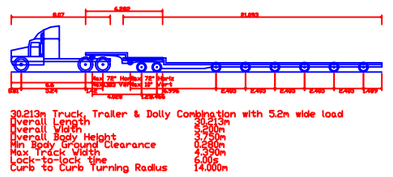
Bettington Street/Vennacher Street, Merriwa

CLIENT:	APA Group
DRG. #:	EMM-208
PROJECT #:	J200919
SCALE:	1:500

REV: 1

COMMENTS

A3



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1	19/11/21	FOR INFORMATION	EL	AU					

PROJECT:
East Coast Grid Expansion - Stage 1
MW880 - OSOM Assessment

DRAWING TITLE:
Route from Newcastle Harbour

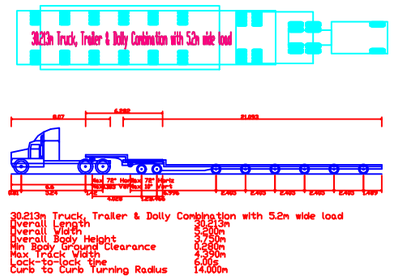
Bettington Street/Dutton Street, Merriwa

CLIENT:	APA Group
DRG. #:	EMM-209
PROJECT #:	J200919
SCALE:	1:500

REV: 1

COMMENTS

A3



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1	19/11/21	FOR INFORMATION	EL	AU					

PROJECT:
East Coast Grid Expansion - Stage 1
MW880 - OSOM Assessment

DRAWING TITLE:
Route from Newcastle Harbour

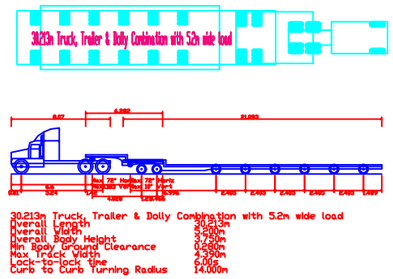
Sullivan Street/Bolaro Street, Dunedoo

CLIENT:	APA Group
DRG. #:	EMM-210
PROJECT #:	J200919
SCALE:	1:500

REV: 1

COMMENTS

A3



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PROJECT:
East Coast Grid Expansion - Stage 1
MW880 - OSOM Assessment

DRAWING TITLE:
Route from Newcastle Harbour

Cobbora Road/Wheelers Lane, Dubbo

CLIENT:	APA Group
DRG. #:	EMM-211
PROJECT #:	J200919
SCALE:	1:500

REV: 1

COMMENTS

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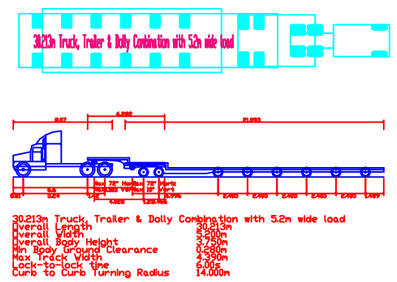

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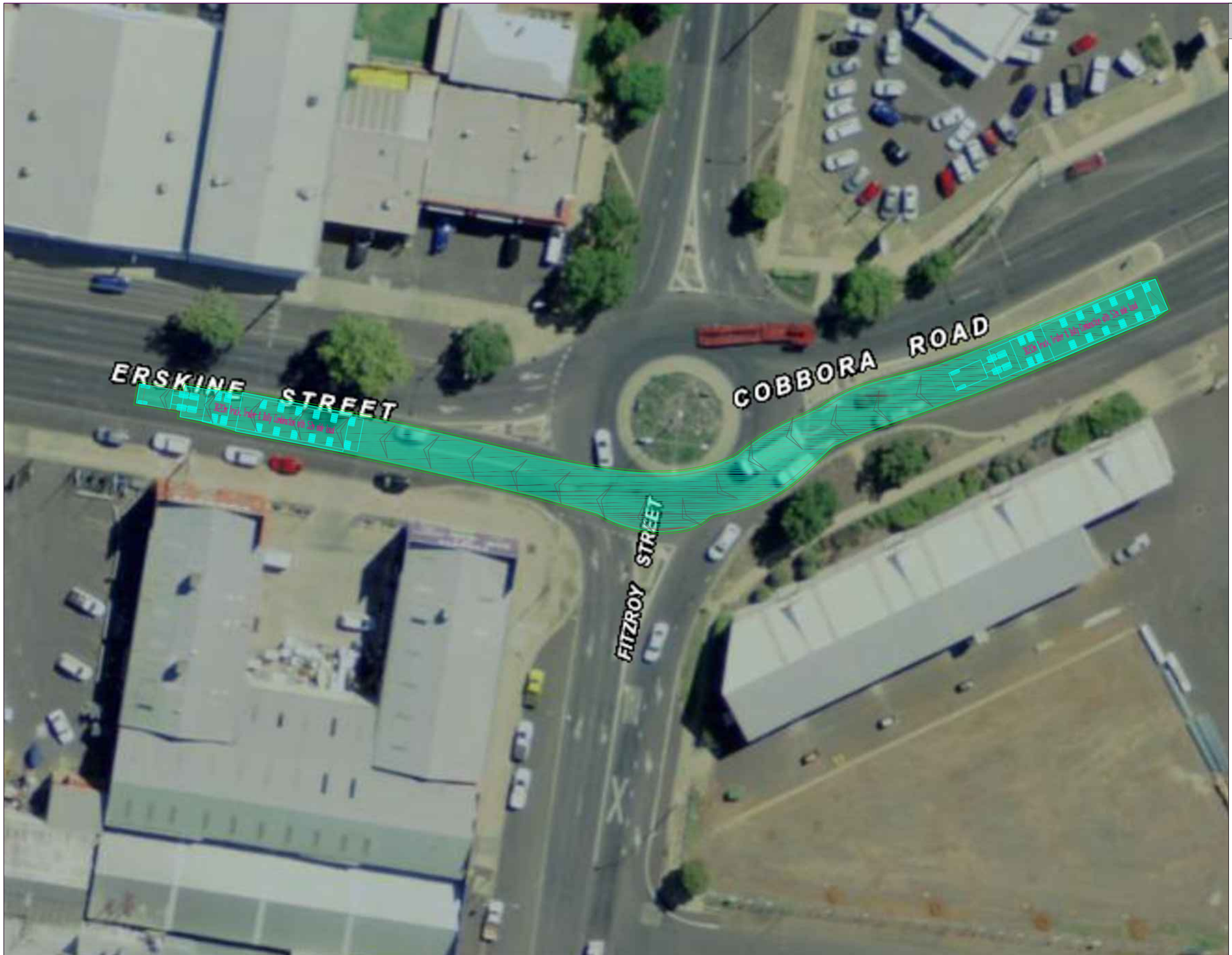
PROJECT:
East Coast Grid Expansion - Stage 1
MW880 - OSOM Assessment

DRAWING TITLE:
Route from Newcastle Harbour

Cobbora Road/Myall Street, Dubbo

CLIENT:	APA Group
DRG. #:	EMM-212
PROJECT #:	J200919
SCALE:	1:500

REV: 1



COMMENTS

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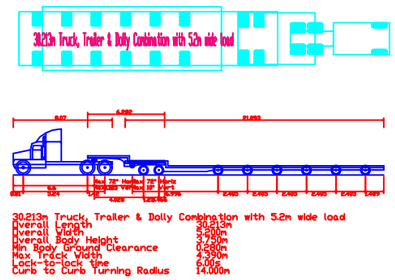

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MW880 - OSOM Assessment

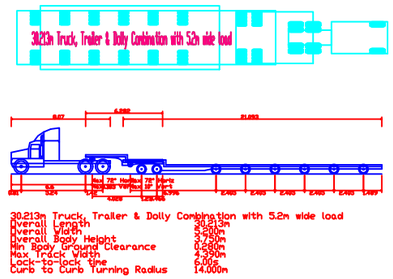
DRAWING TITLE:
Route from Newcastle Harbour

Cobbora Road/Fitzroy Street, Dubbo

CLIENT:	APA Group
DRG. #:	EMM-213
PROJECT #:	J200919
SCALE:	1:500

REV: 1

COMMENTS | A3



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DRAWING TITLE:
Route from Newcastle Harbour

Erskine Street/Darling Street, Dubbo

CLIENT:	APA Group
DRG. #:	EMM-214
PROJECT #:	J200919
SCALE:	1:500

REV: 1

COMMENTS

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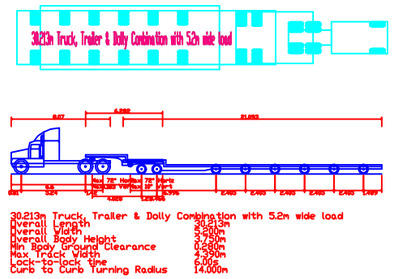

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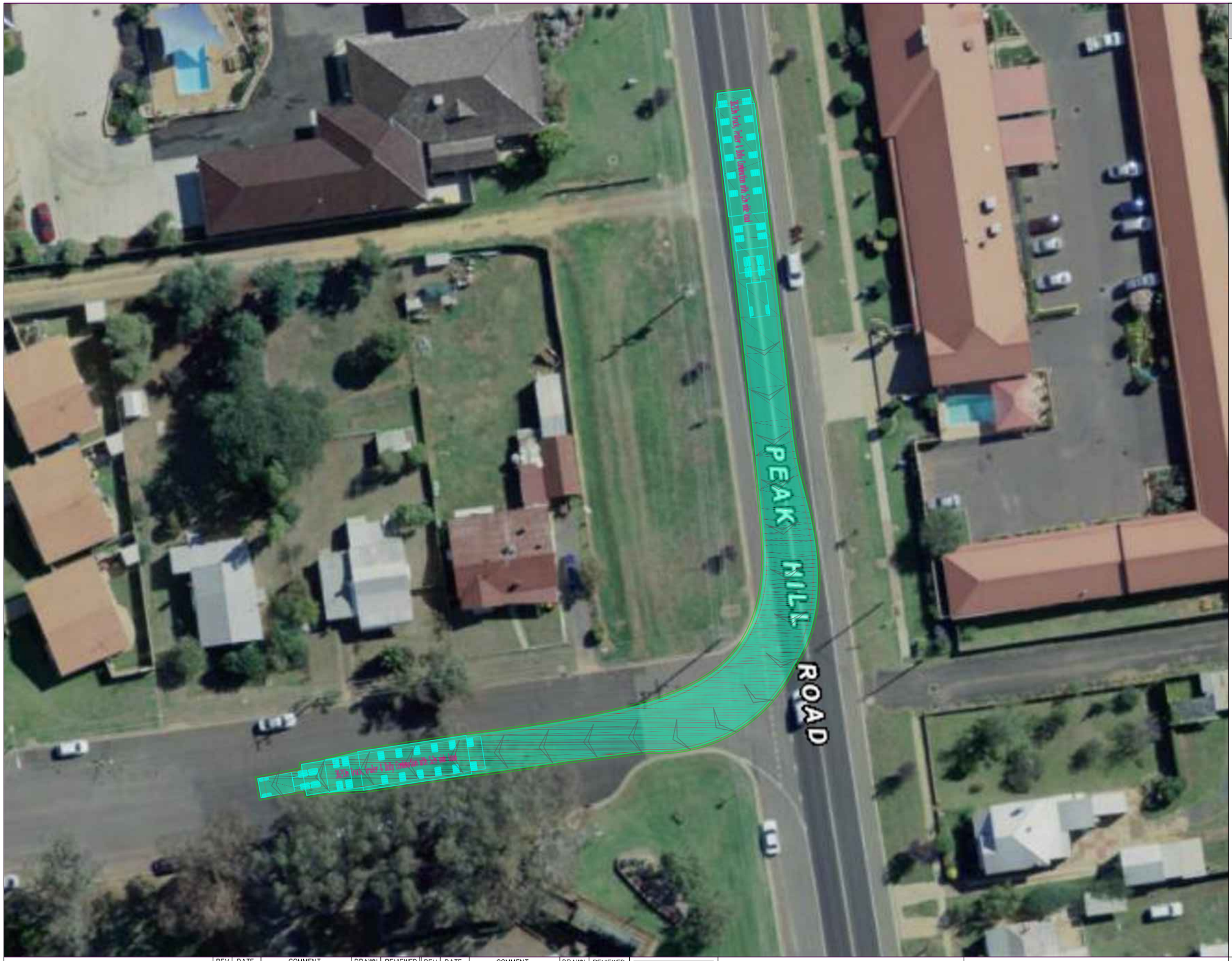
DRAWING TITLE:
Route from Newcastle Harbour

Whylandra Street/Victoria Street, Dubbo

CLIENT:	APA Group
DRG. #:	EMM-215
PROJECT #:	J200919
SCALE:	1:500

REV: 1



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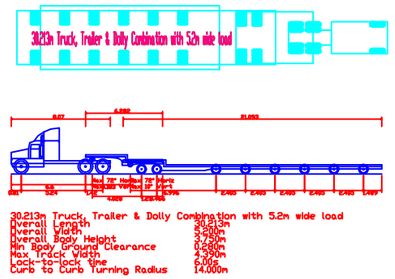

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PROJECT:
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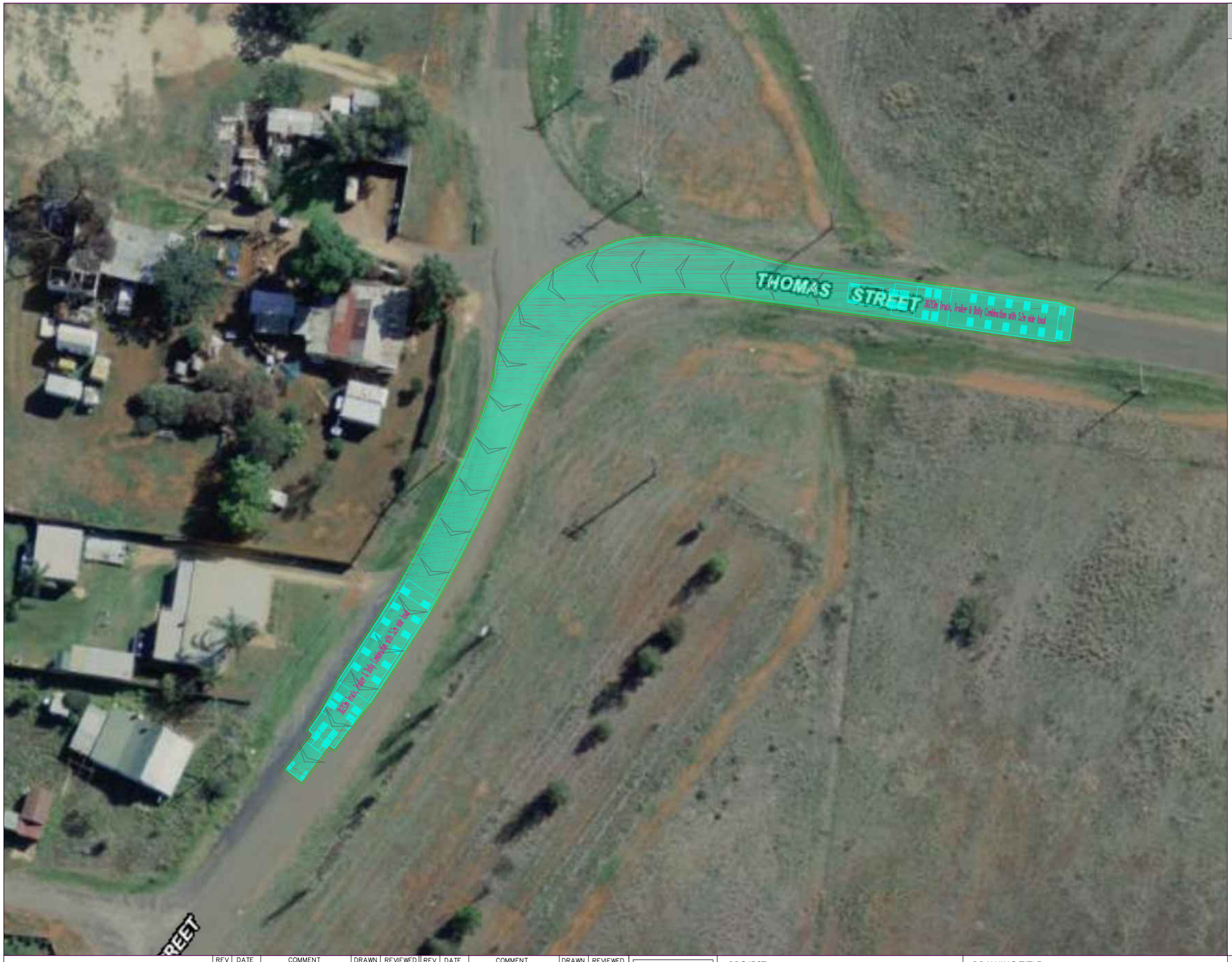
MW880 - OSOM Assessment

DRAWING TITLE:
Route from Newcastle Harbour

Peak Hill Road/Thomas Street, Parkes

CLIENT:	APA Group
DRG. #:	EMM-216
PROJECT #:	J200919
SCALE:	1:500

REV: 1



COMMENTS

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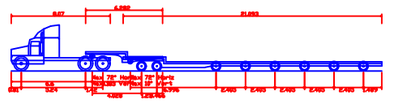

30.213m Truck, Trailer & Dolly Combination with 5.2m wide load

Overall Length	30.213m
Overall Width	5.200m
Overall Body Height	4.300m
Min Ropay Ground Clearance	1.490m
Max Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	14.000m

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PROJECT:
East Coast Grid Expansion - Stage 1
MW880 - OSOM Assessment

DRAWING TITLE:
Route from Newcastle Harbour

Thomas Street/Moulden Street, Parkes

CLIENT: APA Group

DRG. #: EMM-217

PROJECT #: J200919

SCALE: 1:500

REV: 1

COMMENTS

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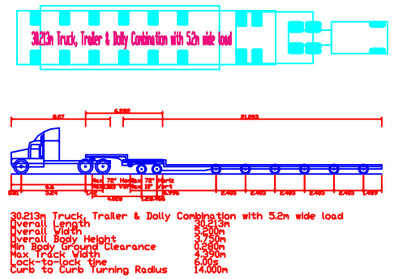

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PROJECT:
East Coast Grid Expansion - Stage 1
MW880 - OSOM Assessment

DRAWING TITLE:
Route from Newcastle Harbour

Back Trundle Road/Moulden Street, Parkes

CLIENT:	APA Group
DRG. #:	EMM-218
PROJECT #:	J200919
SCALE:	1:500

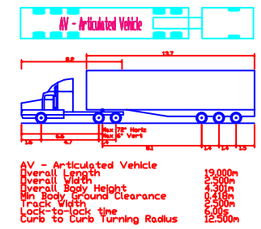
REV: 1

Appendix C

Intersection swept path drawings

COMMENTS

A3



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REV	DATE	COMMENT	DRAWN	REVIEWED

PROJECT:
East Coast Grid Expansion - Stage 1
MW880 - CTMP

DRAWING TITLE:
The Gipps Way/Crown Camp Road

19 m AV swept path

CLIENT: APA Group

DRG. #: EMM-001

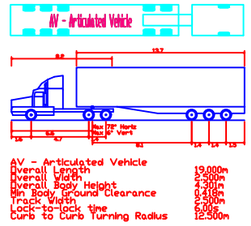
PROJECT #: J200919

SCALE: 1:250

REV: 1

COMMENTS

A3



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1	10/12/21	FOR INFORMATION	EL	AU					

PROJECT:
East Coast Grid Expansion - Stage 1
MW880 - CTMP

DRAWING TITLE:
Crown Camp Road 4.3 km from The Gipps Way

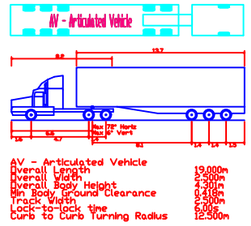
19 m AV swept path

CLIENT:	APA Group
DRG. #:	EMM-002
PROJECT #:	J200919
SCALE:	1:250

REV: 1

COMMENTS

A3



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1	10/12/21	FOR INFORMATION	EL	AU					

PROJECT:
East Coast Grid Expansion - Stage 1
MW880 - CTMP

DRAWING TITLE:
Crown Camp Road 9.3 km from The Gipps Way

19 m AV swept path

CLIENT:	APA Group
DRG. #:	EMM-003
PROJECT #:	J200919
SCALE:	1:250

REV: 1

Appendix D

Drivers Code of Conduct

D.1 Vehicle driver requirements

APA Group will implement all reasonable and feasible measures to minimise the impact of traffic generated by construction traffic operating via the primary transport route from Condobolin, in particular on The Gipps Way and Crown Camp Road.

As part of site induction, all drivers of heavy vehicles associated with construction worksite deliveries will be notified that queuing or parking of vehicles on Crown Camp Road is to be avoided.

All heavy vehicles hauling construction materials to and from the pipeline construction worksites must:

- have undertaken a site induction;
- have comprehension of the relevant requirements of the TfNSW Heavy Vehicle Driver Handbook;
- hold a valid driver's licence for the class of vehicle that they operate;
- operate the vehicle in a safe manner within and external to the construction worksites, including adherence to APA Group's drug and alcohol and mobile phone use policies. Drug and alcohol testing will be in accordance with APA Group's policies. Failure to comply will result in removal from site; and
- comply with all directions of authorised site personnel when within the site.

A single page document detailing the Site Access Traffic Routes and summarising other key aspects of light and heavy vehicle related compliance will be issued to contractors prior to commencement of works. This document is to be read and signed by all contractors. Where there is a failure to comply with this document (or associated contractor or APA Group policies), disciplinary action may be considered.

D.2 Heavy vehicle speed

Increased speed means not only an increased risk of collision but also increased severity if an accident does occur. A study undertaken for the Australian Transport Safety Bureau found that travelling 10 km/h faster than the average traffic speed can more than double the risk of involvement in a casualty or fatality accident (TfNSW).

There are two (2) types of speeding:

- Where a heavy vehicle travels faster than the posted speed limit; and
- Where a driver travels within the speed limit but due to road conditions (e.g. fog or rain) this speed is inappropriate (TfNSW).

Drivers and truck operators are to be aware of the 'Three Strikes Scheme' introduced by TfNSW, which applies to all vehicles over 4.5 tonnes. When a heavy vehicle is detected travelling at 15 km/h or more over the posted or relevant heavy vehicle speed limit by a mobile Police unit or fixed speed camera, TfNSW will record a strike against that vehicle. If three strikes are recorded within a three (3) year period, TfNSW will act to suspend the registration of that vehicle (up to three months). More information is available from TfNSW.

Vehicle speeds on public roads in NSW are enforced by the NSW Police Service. The speed limit within the pipeline construction worksites is 10 km/h which is to be strictly maintained.

All heavy vehicle drivers associated with the pipeline construction worksite are to observe the posted speed limits, with speed adjusted appropriately to suit the road environment and prevailing weather conditions and comply with

other Australian road rules. The vehicle speed must also be appropriate to ensure the safe movement of the vehicle based on the vehicle configuration.

D.3 Heavy vehicle driver fatigue

Fatigue is one of the biggest causes of accidents for heavy vehicle drivers. The Heavy Vehicle Driver Fatigue Reform was developed by the National Transport Commission (NTC) and approved by Ministers from all States and Territories in February 2007.

The Heavy Vehicle (Fatigue management) National Regulation 2013 (NSW) commenced in NSW on 12 February 2014 and applies to trucks and truck combinations over 12 tonnes GVM (however there are Ministerial Exemption Notices that can apply).

Under the law, an industry has the choice of operating under three (3) fatigue management schemes:

- Standard Hours of Operation;
- Basic Fatigue Management (BFM);
- Advanced Fatigue Management (AFM).

All heavy vehicle drivers associated with the pipeline construction are to be aware of their adopted fatigue management scheme and operate within its requirements.

D.4 Heavy vehicle noise and compression braking

The transportation of materials to and from the worksite should generally only occur during the following approved work hours:

- 7.00 am to 6.00 pm, Seven days per week.

Transportation of construction equipment and materials may be undertaken outside of the above hours in the following circumstances:

- works that will not cause noise impacts to the community;
- for the delivery of materials outside these hours, as required by the NSW Police Force or other authorities for safety reasons; or
- where it is required in an emergency to avoid the loss of lives, property and/or to prevent environmental harm.

Compression braking by heavy vehicles is a source of irritation to the community, generating many complaints especially at night when residents are especially sensitive to noise.

In some instances, compression braking is required for safety reasons however when passing through or adjacent to residential areas a reduction in the speed of the vehicle is recommended to reduce the instances and severity of compression braking.

D.5 Vehicle site entry and exit checking

Signage will be provided at each construction worksite entry or exit gate advising the following:

- no truck queuing or parking on public roads;

- cover heavy vehicle loads at all times except during loading and unloading;
- remove any loose debris from vehicle body and wheels before leaving the site;
- ensure tailgate is locked before leaving site;
- observe all local and site speed limits;
- driving to the road conditions;
- responsible fatigue management;
- warning of dangers of mobile phone use while driving; and
- minimise noise from driving or braking.

Loose material or construction debris on the road surface has the potential to cause road crashes and vehicle damage. All construction heavy vehicles arriving at or departing from the construction site that are carrying loads of potential dust generating material must have their loads covered at all times except during loading or unloading, within the site.

All care must be taken to ensure that all loose debris from the vehicle body and wheels is removed prior to leaving the site. Drivers must ensure that following tipping, all tipper vehicle tailgates must be locked before leaving the site.

Heavy vehicles travelling to or from the site must avoid travelling together in close proximity (within 200 m) on any single lane or single lane each way public road.

D.6 Incident reporting

To assist in the orderly resolution of complaints and monitoring the effectiveness of this plan, site management will keep a register itemising all reported incidents or complaints regarding heavy vehicle driver conduct external to the site.

Information to be logged for each incident shall include (as a minimum):

- date and time;
- location/s;
- driver/heavy vehicle details;
- contact details of person lodging the complaint;
- what/when actions were taken to resolve the issue; and
- any response made to a complaint.

Refer to the Construction Environmental Management Plan (CEMP) for further details of all incident reporting procedures for the project construction management.